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LYMPHOGRANULOMA INGUINALE

Report of Sixteen Cases In and Around New Haven*

BY MARION E. HOWARD, M.D.,† AND MAURICE J. STRAUSS, M.D.†

SINCE the introduction of the Frei test in 1925[1] and the proof of its specificity in lymphogranuloma inguinale which followed, there has developed a growing interest in the diagnosis of the disease and an increasing attention to the variety of its clinical manifestations. Earlier work with the antigen was directed primarily toward differentiating cases of inguinal adenitis of unknown etiology, the establishment of climatic bubo and lymphogranuloma inguinale as one and the same condition

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and the study of the disease picture in men. Recognized as a venereal infection, inguinal adenitis in women was rare and cases of contact were few. Its geographical distribution was regarded largely as tropical and the colored race seemed more commonly affected. By 1929, the extension of the work with the Frei antigen made clear the facts that inguinal adenopathy with or without suppuration was not the only clinical evidence of the disease; that its occurrence was by no means limited to men but that chronic vulval elephantiasis (esthiomene) and rectal strictures in women were related etiologically to climatic bubo in men; that the clinical picture might be masked by other infections; that the infection might take the form of a non-specific urethritis[2]. Certainly it has proved to be fairly common in the temperate zone and among the white population. This report deals with sixteen cases of lymphogranuloma inguinale presenting various aspects of the infection which have been found in and around New Haven.

*The antigen used in testing was prepared in the usual manner from five of the reported cases and checked with known antigen from other sources (Dr. Marion Sulzberger and Dr. A. W. Grace of New York). Pus obtained from suppurating buboes was diluted five times with normal sterile saline, inactivated at 60 degrees (C.) for two hours one day, placed in the ice-box overnight and heated again for one hour at 60 degrees (C.) the next day. The test consisted of injecting 0.1 cc. of this antigen intradermally on the flexor surface of the forearm. A test was read as positive when at the end of forty-eight hours a raised papule surrounded by an area of erythema was found at the site of the injection. In negative cases, only the mark of needle puncture remained.

†Howard, Marion E.—Resident, New Haven Hospital. Strauss, Maurice J.—Assistant Clinical Professor of Dermatology, Yale University School of Medicine. For records and addresses of authors see "This Week's Issue," page 358.

CASE 1.

A. B. A thirty-one year old Negro was admitted to the New Haven Hospital on April 11, 1932, complaining of headache, fever and general malaise of eight days' duration. The headache, originally frontal, had shifted to the occipital region and recurred every afternoon and evening, associated with pain at the back of the neck. Five days before admission, the patient noticed swelling and slight tenderness of the glands in both groins, and a dull aching pain across the lower back. No history of syphilis was obtainable and a Wassermann test made one year before admission had been negative. There was history of gonorrhea six weeks prior to the onset of the present illness when he had been traveling in Florida.

Temperature was 100.2° F., pulse 84, respirations 20 and blood pressure 130/84. Inguinal and femoral glands on both sides were considerably enlarged and matted together. On the left, the inguinals were fused with the femorals, forming a mass 9.0 x 6.0 cm. in diameter, rubbery in consistency and not especially tender. Axillary and cervical glands were palpable but not enlarged; the epitrochlears were slightly enlarged. The edge of the spleen was definitely palpable on deep inspiration, sharp, but not very hard. There was a leukocytosis of 12,520 with polymorphonuclears 60 per cent, lymphocytes 24 per cent, large mononuclears 12 per cent and eosinophils 2 per cent. The Kahn and Wassermann reactions were negative, tuberculin test (0.2 cc. of 1/1000 O. T.) was positive.

Two days after admission, softening of the glands in the left groin was noted. Gland puncture yielded 0.5 cc. of thick creamy pus. No organisms were seen on direct smear of the pus. Cultures in broth and on blood agar, aerobically and anaerobically gave no growth. Darkfield examination was negative for spirochetes.

A week after admission, the headache and general malaise had disappeared; the patient was afebrile. The leukocytosis persisted (13,100 cells) with a differential showing polymorphonuclears 50 per cent, lymphocytes 24 per cent, large mononuclears 23 per cent, eosinophils 2 per cent and basophils 1 per cent. There was fluctuation of the glands in

the left groin and early softening of those on the right. A second gland puncture yielded 2.0 cc. of slightly yellow, creamy pus, sterile in broth, on blood agar, Korper's and Sabourraud's media. Inoculation into a guinea pig resulted in a sterile abscess at the site of the inoculation without any regional or general glandular enlargement. Antigen was prepared from this pus, and in the patient, the injection of the antigen resulted in a papule which increased to 3 mm. in diameter within forty-eight hours surrounded by a small area of redness. There was a good deal of local tenderness. In a control, within forty-eight hours, there was a tiny papule only 1 mm. in diameter without any surrounding redness and no tenderness.

Following the second puncture, glands in the left groin decreased in size and at the time of discharge (May 13, 1932) there was a firm rubbery matted group of glands measuring 4.0 x 5.0 cm. On the right, however, the glandular mass had become fluctuant and on the day of discharge 2.0 cc. of thin, blood-tinged material was obtained by gland puncture. This was bacteriologically sterile as the others had been.

The patient was seen again in September, 1932, when there remained small masses of shotty glands in both groins, those on the right slightly larger than those on the left. Intracutaneous test with 0.1 cc. of known Frei antigen gave within forty-eight hours a papule 4 mm. in diameter, surrounded by a red areola of 1.7 cm. In January, 1933, eight months after discharge from the hospital, the inguinal glands were even smaller than they had been in September. The patient had had no treatment and had been carrying on his occupation as chauffeur without untoward effect.

CASE 2.

E. F. A thirty-three year old white male admitted to the Middlesex Hospital October 2, 1934, for a herniorrhaphy. Glands in both inguinal regions were found to be enlarged, quite firm and slightly tender, and the patient stated he had had some discomfort on walking and had noticed slight swelling in the groins for two weeks. Frei tests were positive. Kahn and Wassermann tests were negative. For the first few days of hospitalization, the patient ran a mild febrile course, 100-100.6°F. There was a leukocytosis of 14,600 with a relative increase in lymphocytes and large mononuclears. The glands slowly increased in size, particularly on the left with central softening. About a week after admission, there was found a papule the size of a hickory nut on the under side of the penis halfway up the shaft. This ruptured spontaneously and had entirely healed by October 28. Pus from this nodule showed organisms morphologically typical of gonococci. On October 17 the glands in the left groin were aspirated and 5.0 cc. of thick, tenacious, slightly blood-tinged pus was obtained. Eight days later glands on the right were aspirated yielding 4.0 cc. of thick, yellowish green pus. He was treated by means of intradermal injections of Frei antigen as follows: On October 29, November 8, November 14 and November 25 he was given 0.3 cc. each time. There was no tenderness or swelling in the inguinal regions until November 25 when he complained of pain and swelling in the right groin. There was present a slightly fluctuant red mass about 2 x 2 cm. in the right inguinal region. On November 27 this was aspirated and about 3 cc. of white purulent material obtained. He has not been seen since that time.

CASE 3.

J. L. Aged twenty-two years, white male, single, was first seen February 27, 1933, with a urethral discharge of two months' duration. Smears of the pus showed gonococci, and treatment was begun. On March 29, 1933, there was found a small superficial ulcer of the mucosa of the prepuce just behind the corona. The inguinal glands were enlarged, discrete and non-tender. Mercurochrome had been applied to the ulcer so no darkfield examination was made. Two days later, March 31, 1933, there was a definite collar of induration surrounding the ulceration and darkfield examination showed typical Treponema pallidum. Wassermann and Kahn tests were negative but antiluetic treatment was started. Two months later, May 26, 1933, the patient was confined to bed because of tender matted right inguinal glands which he treated with hot applications. By June 6 the mass had softened and 5.0 cc. of a mixture of blood and very thick pus was aspirated. Repeated Frei tests, with autogenous and two other antigens proved positive, the autogenous giving the least reaction. The glands though still enlarged had receded in size; there was no tenderness or sinus formation. There has been no treatment.

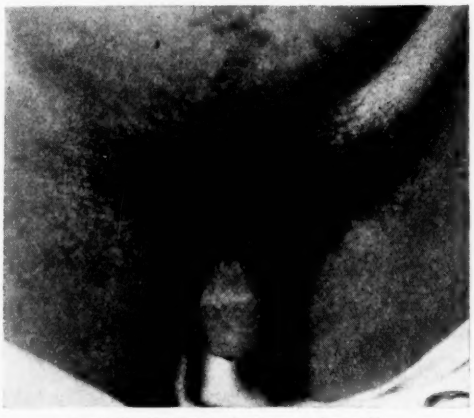
CASE 4.

A. A. Aged forty-seven years, white male, married, was first seen June 7, 1933, complaining of a sore on his penis and swelling in the groin. He gave a history of extramarital exposure with a Negress one month previously. The inguinal swelling had been present for two days and the penile sore for one week. On examination there was a profuse purulent urethral discharge and two involuting punched-out ulcers with thick borders on the preputial mucosa. There was a bilateral inguinal adenitis, non-tender and showing no signs of periadenitis. A smear of the urethral discharge showed many pus cells but no organisms. Subsequent smears gave similar results. Initially, the Wassermann and Kahn were negative but one week later, June 14, 1933, the Wassermann was negative and the Kahn positive. Antisyphilitic treatment was started. By June 30 the inguinal glands had become larger, quite tender and matted together, with central softening. Aspiration yielded 12.0 cc. of thick yellowish pus from which an antigen was prepared. Another 10.0 cc. of pus was removed July 5. The mass at this time extended along the cord toward the scrotum and there was a draining sinus at the point of previous aspiration and a spontaneous sinus at the lower end. The patient had some difficulty and pain on walking, and felt ill. Frei tests done on July 13, 25, and September 6 with known and autogenous antigens were all positive, the reaction to the autogenous vaccine being most marked in this case. Two days following the second group of Frei tests, July 27, 1933, the patient felt much improved and the glandular swellings were decreasing in size. He was treated with 0.3 cc. of antigen intradermally on September 6 and by September 12 the sinus tracts had stopped draining and the glands were still receding. When last seen, April 2, 1934, the inguinal mass had almost disappeared with puckered scars at the old sinus sites. April 4, 1934, the patient still gave a positive reaction to Frei antigen. A Frei antigen made from pus from this patient's glands was regularly positive in other cases of lymphogranuloma inguinale and negative in controls.

CASE 5.

J. D. A twenty year old, American, white male was first seen January 24, 1934, complaining of urethral discharge of ten days' duration, the onset following exposure by five days. Examination of a smear was positive for gonococci and routine treatment was started. On February 16, 1934, there was seen in the left inguinal region, a large, hard, slightly tender

mass which had first appeared three or four days previously and had rapidly attained the size of a small orange. Frei tests were positive with two antigens. On March 9 there was an area of softening in the center of the matted glands. There were no glands palpable on the left. One week later, March 16, 1934, about 2.5 cc. of blood and pus were aspirated from the mass; five days later another 2.5 cc. of pus were obtained. Repeated small doses of antigen were given intradermally as follows: March



CASE 5. Unilateral abscess formation.

28, 0.3 cc.; April 2, 0.2 cc.; April 9, 0.3 cc. All injections gave positive reactions. The mass of glands decreased in size, became firm and only slightly tender with no further discharge from the sinuses by April 11, 1934. Antigen made from pus from this patient was also positive in patients with lymphogranuloma inguinale and negative in controls.

CASE 6.

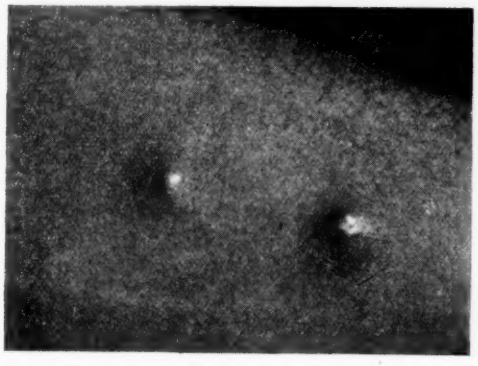
L. M. White, male, married, thirty-five years old and a laborer by occupation was admitted to Grace Hospital on April 29, 1932, complaining of pain and a gradually increasing swelling in the left groin and swelling of the prepuce of two months' duration. There was no elevation of temperature and the blood count showed W. B. C. 10,300, polymorphonuclears 74 per cent, lymphocytes 14 per cent, large mononuclears 8 per cent and eosinophiles 4 per cent. The Wassermann and Kahn tests were negative and remained so on repeated examinations throughout the period of observation. On examination there was found a small hard gland in the right inguinal region with the overlying skin quite reddened. In the left groin there was a lemon-sized mass of matted glands with definite fluctuation in one or two places. On the dorsal portion of the prepuce lying in the subcutaneous tissue was a hard rounded mass about the size of a large bean. There was no overlying ulceration. Darkfield examination of material aspirated from one of the glands which had not suppurated was negative. On May 6 the glands were incised and curetted, and the patient was circumcised. An attempt was made to make a Frei antigen from the pus obtained but owing to a laboratory error the material coagulated, leaving a small amount of clear supernatant fluid which proved to be of no value.

On May 14 the patient was tested with various antigens. The autogenous antigen gave no reaction. A known Frei antigen gave at forty-eight hours an area of erythema one inch in diameter with a definite raised central papule capped by a vesicle. Three days later the reaction reached its maximum and then subsided. A third antigen which had not previously been tested gave at forty-eight hours an area of erythema three fourths of an inch in diameter with a papule and minute vesicles in the center. Three days later the papule was still notably present.

During hospitalization the inguinal glands on the right side gradually enlarged and became matted but there were no areas of softening. The patient left the hospital against advice. He was seen again on June 6, at which time the wound in the left inguinal region was granulating, and beneath, a deep hard nodular mass could be felt. The mass in the right inguinal region was larger than before. On June 11, this mass was noticeably smaller. The patient disappeared until October 25, at which time there was a scar in the left inguinal region and palpable non-tender glands on both sides but no periadenitis. The Frei test at this time was still positive.

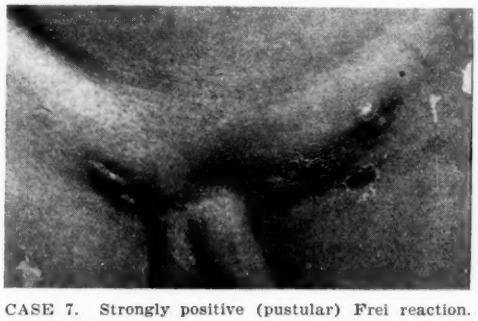
CASE 7.

E. R. A male Negro, thirty-six years old and a farmhand by occupation, was admitted to Grace Hospital on June 3, 1932, complaining of pain in both



CASE 7. Showing multiple fistulae in both inguinal regions.

groins. He gave a history of promiscuous exposure and stated that about five and a half months before he had had three lumps in his right groin which he brought to a head by means of home remedies. About two weeks before admission he had two lumps in his left groin which he had also treated by means of home remedies. Because of the severe pain he came to the hospital. He stated that dur-



CASE 7. Strongly positive (pustular) Frei reaction.

ing the past two weeks he had had chills and fever. On admission his temperature was 99.4° F. and rose to 100.6° F. becoming normal the third day after admission. The blood count was as follows: R. B. C. 4,660,000; Hgb. 75 per cent; W. B. C. 15,800; polymorphonuclears 81 per cent; lymphocytes 9 per cent; large mononuclears 6 per cent; eosinophiles 3 per cent; and basophiles 1 per cent. The urine showed a very slight trace of albumin and several hyaline and granular casts. On physical examination he presented a mass in each inguinal region consisting of enlarged, matted, non-tender glands, to which the thinned overlying skin was attached.

There were several sinuses discharging a thin, purulent material.

On June 6 a Frei test was done with a tested vaccine obtained through the courtesy of Dr. M. B. Sulzberger. Within five minutes there appeared an erythema about one and one-half inches in diameter. This rapidly faded and at the end of twenty-four hours the site of the injection presented a definite papule with a central vesicle. At forty-eight hours the papule was larger and the central vesicle more definite. On the fourth day there was an area of marked erythema one inch in diameter with a central pustule about one-quarter inch in diameter. This pustule was punctured and the pus aspirated.

On June 16 the entire inguinal mass on the right side was dissected out. At operation this was found to extend down to the femoral vessels and into the scrotum. The wound was packed with iodoform gauze and allowed to granulate in. On June 27 a Roentgen ray treatment consisting of one skin unit filtered through 3 mm. of aluminum was given over the left inguinal region. On July 11 the wound in the right inguinal region was almost healed and the patient was discharged. He did not return for further observation.

CASE 8.

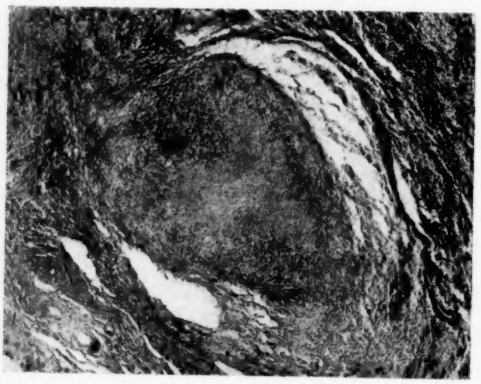
J. H. B. Aged sixty years, married, white, salesman. The patient was seen first on September 18, 1933. He was referred by his physician and the previous history was obtained from the latter. On the thirteenth of June he consulted his family physician because he had had a swelling in his left groin for one week. At that time there was, in his left groin, a hard slightly tender enlarged gland approximately 1 cm. in diameter. There was no evidence of any genital lesion and there were no lesions on the leg to account for the swelling of the gland. Rectal examination was negative. Local applications were prescribed and on the nineteenth of June the swelling had become very painful. His temperature was normal and on June 21, 1933, the gland was excised. It was found to contain two distinct abscesses. Cultures from the contents of these were negative and guinea pig inoculation for tuberculosis was negative. The wound healed partially but left several draining sinuses. On September 18, 1933, when first seen (M. J. S.), there were several bean sized non-tender discrete lymph nodes in the right inguinal region. In the left inguinal region there was a mass, one and one-half inches in diameter, made up of glands which were matted together. Overlying the mass was a linear scar containing three sinuses from which a thin serous fluid exuded. Just below the scar was a fourth sinus with a similar exudation. Frei tests were done with four different antigens and on September 20 all four tests showed a definite reaction consisting of an erythematous area about one-half inch in diameter with a central papule. On September 25 the patient had noticed that there was much less material coming from the sinuses. He was therefore given 0.2 cc. of Frei antigen in two wheals, intradermally, followed by similar doses on September 30, October 7, and October 14. From the first of October on there had been no drainage and it was no longer necessary to wear a dressing. There was still a small oval, firm mass about an inch in length beneath the scar. He has had no treatment since October 14, 1933.

CASE 9.

A. B. An eighteen year old white male was first seen October 17, 1934, when he stated that approximately two months before, he had entered a hospital because of swollen glands of six weeks' duration. Last exposure had been about six weeks before onset of glandular swelling. He had also had a very small sore on the frenum before the glands began to swell; this sore healed slowly. On examination, there was a minute scar at the site of the old ulceration. In each inguinal region there was a linear scar where the glands had been excised.

CASE 9. Photomicrograph (×20) showing in the upper right corner two small abscesses and in the lower left corner several abscesses which have become confluent.

Beneath and around these scars there could be felt non-tender, irregularly shaped, indurated masses which seemed to be made up of several glands matted together. Near the upper end of the scar on the right side was a small sinus exuding a seropurulent fluid. Frei tests were positive and the Wassermann negative. On October 26 he was given



CASE 9. Photomicrograph (×95) showing necrotic central area with surrounding cellular reaction.

0.3 cc. of Frei antigen intravenously; 0.2 cc. of antigen had been used intradermally for the original tests. He was next seen on November 9, at which time there was no further discharge from the sinus and he was again given 0.3 cc. of antigen intravenously. A section of the glands which had been excised showed the typical picture of lymphogranuloma inguinale. (Cf. Cut.)

CASE 10.

M. Br. Portuguese Negro of forty-two years and husband of *A. Br.*, Case 13, was tested with Frei antigen as a contact. He gave a history of inguinal adenitis in 1914. The glands had been incised and there was also spontaneous rupture at another point at the same time. On examination in 1932, there were a few hard shotty glands in the left inguinal region with two scars in the overlying skin. Frei test resulted in a small red papule with no surrounding areola.

CASE 11.

B. S. A fifty-eight year old Jewish male admitted to the New Haven Hospital October, 1934, with complaints of severe right upper quadrant pain, bleeding piles and painful joints. In April, 1931, a hemorrhoidectomy had been performed at the Bridgeport Hospital and microscopic examination of some anal papillae which were removed, raised the question of possible malignancy. The patient at that time was suffering with a so-called chronic ulcerative colitis and multiple arthritis. Another biopsy of a protruding anal mass done in April, 1932, showed no evidence of a malignant process. The patient's symptoms of constipation and the oozing of white and yellow pus and blood have persisted to the present time. For the past year, there had been swelling, stiffness, and pain in both legs. On examination there was a mass of condylomata surrounding the anal orifice, forming almost a complete ring though more numerous on the right side. They arose from a broad base; the individual lobules were about 0.5 cm. in diameter, elevated about 2.0 cm., and covered with smooth glistening skin. Thick pus and blood exuded from the anal orifice; no fistulae were to be seen. Rectal examination gave the impression that the rectal mucosa was replaced by these masses, extending as far as the examining finger could reach. 7.0 cm. from the sphincter, there was a stricture, not so dense but that the finger could be passed through. Proctoscopic examination confirmed these findings. In both inguinal regions were felt numerous enlarged, non-tender lymph nodes. Frei test on the right forearm was strongly positive.

CASE 12.

I. H. A forty year old colored woman admitted to the New Haven Hospital June 8, 1933, with a diagnosis of bilateral, acute and chronic, pelvic inflammatory disease. There was no history of genital lesions or enlargement of the inguinal glands. Four years before, she had begun to be troubled with constipation and difficulty in defecating. Kahn was four plus and the Wassermann negative. A rectal examination was done during the routine physical examination and 5.0 cm. from the anal orifice was found a firm smooth annular somewhat tender stricture preventing the examining finger from passing but the lumen of which was approximately 5 mm. in diameter. Simultaneous examination of the vagina revealed thickening of the recto-vaginal septum in the region of the stricture. The inguinal glands were shotty and discrete. Frei tests were strongly positive. Proctoscopic examination showed the stricture to be annular, pale, glistening, with a central aperture of 0.5 cm. The walls of the stricture seemed composed of dense fibrous connective tissue, so dense in fact that it was impossible to snip out a piece for biopsy.

During the patient's stay in the hospital, the stools on catharsis were loose, mucoid, light brown in color, and negative for blood, starch, fat, or ova.

CASE 13.

A. Br. A thirty-five year old colored woman was first seen in the dispensary of the New Haven Hospital in July, 1923, with a rectal stricture. Three years before she had had an operation for anal fissure or fistula-in-ano at another hospital, following which she had suffered with alternating bouts of constipation and diarrhea and at times the passage of bright red blood and clots. Physical examination at this time revealed a palpable spleen. About the anus, there was a considerable amount of mucopurulent discharge, redundancy of the tissues and lack of sphincter tone. There was a rectal stricture 5.0 cm. from the anal opening. The left half of the stricture was quite indurated and there was a ventral cleft running longitudinally with a tag of tissue hanging from the right side. The blood Wassermann was four plus and the impression was that the stricture was luetic. Antisyphilitic treatment was started but the patient lapsed. She returned in August, 1930, with complaints of pain in the rectum, and constipation. Then on rectal examination there was found a profuse, thin, foul-smelling, yellowish discharge. The skin at the mucocutaneous border was thickened. 3.0 cm. above the external sphincter the examining finger met a tender, indurated, symmetrical, annular stenosis. On proctoscopic examination, the lumen of the bowel was constricted to less than 1.0 cm. The anterior rectal wall was lined by firm, glistening fibrous tissue and the posterior wall by granulation tissue. On the anterior rectal wall just below the constriction was found a sinus tract 1.5 cm. in length from which exuded a large quantity of yellow foul-smelling pus which on culture yielded B. coli and non-hemolytic streptococci. By repeated manual dilatation a decided relaxation of the very narrow ring was obtained. Two small pieces of tissue from the stricture taken for biopsy, one of which was smooth, white, and glistening and the other apparently granulation tissue, showed on microscopic examination scar tissue in which there was marked small round cell and polymorphonuclear infiltration, and granulation tissue showing an acute and chronic inflammatory process.

The patient's final hospital admission was in October, 1932, with generalized arteriosclerosis, hypertension and chronic nephritis of which she died in December, 1932. On rectal examination, there were several verrucae in the perianal region. Insertion of the index finger into the anal canal caused pain and the finger was arrested 2.0 cm. from the anal orifice by an indurated, slightly irregular stricture which bled easily. Frei tests were positive. Postmortem examination showed the wall of the large intestine to be edematous, exceedingly so toward the sigmoid. At the rectosigmoid junction, there was a superficial ulcer measuring 6.0 in diameter. The rectal mucosa was replaced by a rather vascular granulation, the surface of which was covered by a fibropurulent exudate and necrotic débris. All the layers of the rectal wall were thickened by edema, fibrous connective tissue proliferation and round cell infiltration. These changes extended also external to the muscle layer and to the adjacent adipose tissue. The localization of the changes seemed to be about the blood vessels.

CASE 14.

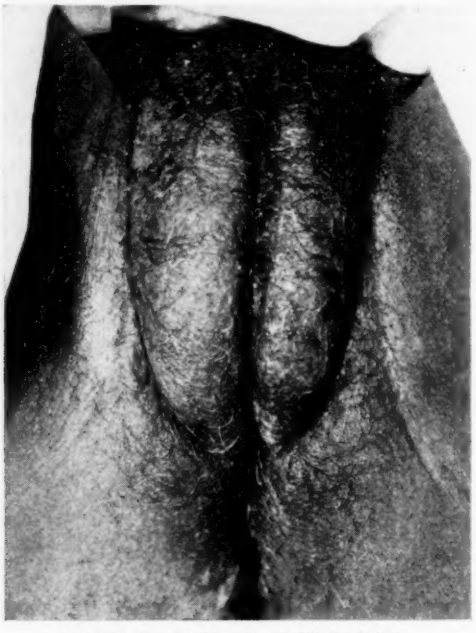
M. S. A thirty-five year old married Negress was admitted to the New Haven Hospital September 16, 1934, complaining of pain in the rectum. She had been constipated for the past two or three years and had had to take various laxatives. One month before admission while straining at stool, she suffered a bearing down pain and burning sensation in her rectum. She consulted her doctor who advised hospitalization in another hospital where a rectal abscess was incised and drained. During the ensuing month she lost eighteen pounds in weight.

On examination, the external genitalia were normal, as was the vaginal mucosa. The cervix was lacerated and there was a profuse whitish tenacious discharge. Outside the anal margin and to the left was a scar which the patient stated was from an old injury. Nearer the rectum and on the same side was what appeared to be the opening of a fistula although nothing could be squeezed out of this. There were two small hemorrhoids. On rectal ex-

amination, the finger reached an obstruction at about 5.0 cm. This was firm and seemed to be due to a narrowing of the entire lumen. The patient denied any knowledge of any enlarged glands in the groin and examination failed to reveal any enlargement of note. Frei tests were strongly positive. The Wassermann and Kahn tests were negative. Treatment consisted of weekly intradermal injections of 0.3 cc. of Frei antigen. At the time of writing she has received three such treatments and feels much improved.

CASE 15.

F. S. A colored woman of forty-two years who paid frequent visits to the syphilis and gynecologic out-patient clinics of the New Haven Hospital between the years of 1925 and 1929 with the complaint of vaginal tenderness and discharge. When first examined, there were redness and excoriation of the skin of the perineum and a large irregular indurated mass at the junction of the left labium with the fourchette, with a deep central ulceration, the borders of which felt distinctly cartilaginous. On part-



CASE 15. Elephantiasis of the labia.

ing the labia, an opening to a sinus tract was found. With a blunt probe in the tract, the end could be made out on rectal examination just under the rectal mucosa about 4.0 cm. above the anal orifice. There was no history of gas or fecal material having been passed per vaginam. Chronic cervicitis and chronic pelvic inflammatory disease were also present. The patient had been under antisyphilitic treatment irregularly since 1923. The Wassermann was four plus. The lesion at the fourchette was variously diagnosed syphilitic, tuberculous, and granulomatous (granuloma inguinale). It defied all forms of therapy; arsenic, antimony, mercury, light, cauterization, and even excision of the ulcer and sinus tract.

She disappeared in 1929, returned in 1931 for investigation of a possible pulmonary tuberculosis, then disappeared again until August, 1933. At this time she complained of pain in the rectum and incontinence of feces on occasion. The labia were markedly hypertrophied and covered with apparently normal skin and mucosa without any ulceration. They were doughy in consistency. There was no evidence of ulceration at the fourchette. The skin about the anus was somewhat pigmented and thickened and just to the left of the anus, was the opening of what proved to be a fistulous tract exuding a small amount of thin material. On rectal examination the tip of the examining finger just met a smooth firm annular stricture, with a lumen of about 5 mm. in diameter. The inguinal glands were just palpable, and quite firm. A combined fluoroscopic and radiographic examination of the sigmoid and rectum with the aid

CASE 15. Anteroposterior radiograph following barium enema.

of a barium clysma revealed a stricture of the ampulla of the rectum. The Kahn and Wassermann tests were now negative. The Frei tests with three known antigens were all positive.

CASE 16.

V. N. A thirty-three year old, colored woman who came intermittently to the New Haven Dispensary from 1925 to 1927 for antiluetic treatment. In 1921 she was hospitalized for incision and drainage of a pararectal abscess. There was a soft fluctuant tender mass in the left ischiorectal fossa the skin over which was broken down and a small quantity of pus exuded. Rectal examination revealed no connecting sinus. At this time, there was no evidence of stricture. In October, 1932, she was admitted with a contused and infected laceration of the lower lip. In the course of a routine examination, there were found several round scars above the anus, in the center of one just to the left of the anus was a sinus tract discharging pus. Less than an inch inside the sphincter was a tight, somewhat rough, acutely tender stricture which did not admit the finger. The internal opening of the fistula lay just above the stricture. Frei tests were strongly positive. Treatment was advised, but the patient failed to return. She was readmitted to the New Haven Hospital November 12, 1934, with severe lower abdominal pain. Examination revealed four peri-anal fistulae draining a thin foul-smelling pus, and a recto-vaginal fistula with rolled cartilaginous edges. The rectal stricture was still present. The Frei test was strongly positive. There were tenderness, spasm, and rigidity of the lower abdomen, particularly the left lower quadrant. It seemed likely that she had developed a fistulous opening into the pelvis, so an exploratory laparotomy was done. The pelvis was found to be filled with thin foul-smelling pus like that exuding from the perianal fistulae. The intestines were matted together. Drainage only was done and the outcome at the moment is doubtful.

DISCUSSION

The first eleven cases reported give in résumé the usual course of the disease in the male. Cases 1 and 2, the earliest cases we have seen, displayed the systemic reaction sometimes found, with mild fever, malaise, headache, low back pain, slight leukocytosis with a relative lymphocytosis and an increase in large mononuclears, slight splenic enlargement as well as the regional adenopathy in which at the time of admission suppuration had not yet taken place. Although early cases, no evidences of primary lesions were found.

The next seven cases (3 to 9) represent the more usual disease picture in men, i.e., inguinal gland swelling, with or without suppuration and sinus formation and in many instances associated with some other venereal infection. Early the glands are firm, tender and discrete. . As the process advances, the glands become matted, the overlying skin, thinned, reddened and adherent. Central softening, suppuration followed by sinus formation and secondary infection usually resultant, are the features of the clinical picture of the older writers. Because of the variety of the secondary invaders isolated, the etiology was long obscured. It now seems fairly well established that the causative agent is a virus[3]. In seven of the cases reported, 1 to 7 inclusive, the glandular involvement was early and signs of fluctuation were carefully watched for before aspiration was attempted. The material aspirated if bacteriologically sterile and free from blood was used to prepare antigen. In only one case which had been aspirated did a sinus tract develop at the site of needle puncture, and in two, sinuses were present when they first came under observation.

Case 10 is of interest from the standpoint of the history of contact and for the fact that the Frei test is positive eighteen years after infection.

When studies have been completed, Case 11 will be reported in detail, The anal condylomata are an unusual manifestation and the question may fairly be raised as to whether they are active lesions of lymphogranuloma. It is well to bear in mind in this connection that the Frei test tells us only that the patient has been infected with lymphogranuloma; it does not indicate that the lesions present at the time of testing are of necessity evidences of the disease.

Lymphogranuloma inguinale in women presents a very different problem from that in men due to differences in lymph drainage from the various parts of the genitalia in the two sexes. Hellerström[4] in 1929 reporting forty-seven cases found only two women with positive Frei tests and assumed that women are often merely "bacillus carriers". Rectal strictures, their position, their etiology, the preponderance of their appearance in colored women have long been well described and discussed in medical literature. It was not until 1927 when Frei[5] and others were proving the specificity of the Frei test that positive reactions in patients with rectal strictures led them to place lymphogranuloma along with syphilis, tuberculosis, gonorrhea and amebic dysentery as an etiological factor in so-called inflammatory strictures.

In the five cases (12 to 16) of lymphogranuloma in women reported from this clinic, all occurred in colored women, all had rectal strictures at approximately 5 to 8 cm. from the anal orifice, and in all the infection was of long standing. Four of the five (12, 13, 15, and 16) had positive Kahn and Wassermann tests and had had some antiluetic treatment in the past. In only one (15) was the rectal stricture associated with vulval ulceration and genital elephantiasis (esthiomene). Inasmuch as four of the five cases had positive Kahn or Wassermann reactions as well as positive Frei tests, the stand may well be taken that we have no clear-cut proof that we are dealing with strictures due to lymphogranuloma rather than to syphilis. If one accepts the opinion of a variety of authors according to Stokes[6], syphilis of the rectum is rare and the diagnosis often made uncritically. In two of our cases (13 and 15) such a diagnosis was originally made and in one (15) intensive antiluetic treatment was instituted without avail.

It is of interest that in four of the five, there were fistulous tracts in close association with the stricture, the internal fistulous opening coming just above or below it. Although at final examination the strictures were in all instances annular and composed of dense fibrous connective tissue, in Case 13, the progression over a period of years from a semi-circular indurated rectal mass to a symmetrical annular constriction was followed. It is well recognized that rectal stenosis is a late manifestation of lymphogranuloma inguinale, but too little attention has been paid to the slowly progressive smoldering chronicity of the infection at this site. This is well illustrated in Cases 13, 15, and 16. In Case 16 over a two-year period, there was healing of old fistulous tracts and the formation of new ones with the final breaking through into the pelvis.

A word about treatment is perhaps indicated. It seems to have been forgotten in an enthusiasm to try some therapeutic measure that spontaneous subsidence and resolution occur quite frequently in this disease. This the West Indian natives understood quite well and the climatic bubo was treated with bed rest alone. Antimony preparations (stibenyl, tartar emetic, neostibosan), the dyes, quinine, emetine, iodine, yatren have had their advocates as have x-ray, radium, ultraviolet light, and radical early extirpation of involved glands. No one of these has proved

startlingly successful. Even non-specific protein therapy has had its day. The use of vaccine therapy[7] is now of considerable interest and is being tried in this clinic. Cases 2, 4, 5, 8, 9, 11, and 14 are being tried with this form of therapy, and as yet it is too early to measure its success. It has been noticed that discharging sinus tracts have healed with repeated intradermal or intravenous injections of small doses of Frei antigen. More than that cannot be claimed at this time.

SUMMARY

1. Sixteen cases of lymphogranuloma inguinale, eleven in men and five in women, found in and around New Haven are reported.

2. Of the eleven men, eight were white and three were colored; all five women were colored.

3. All cases gave a positive skin reaction with Frei antigen.

4. In ten men, typical inguinal adenitis was observed, two of these with early general systemic reactions. The anal condylomata of the eleventh case are regarded as an unusual manifestation of the disease.

5. All five women had rectal strictures, in one associated with esthiomenous lesions.

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GRANULOMA INGUINALE

BY PAUL R. BRIGGS, M.D.*

GRANULOMA Inguinale Tropicum or venereal granuloma is of rare occurrence in New England and especially infrequent in the white male. It is believed by the writer that because of the casual occurrence of this disease the medical profession is prone to overlook the unusual case and treat it otherwise.

For the above-stated reasons a brief review of the condition is felt to be in order. The condition has been described as a serpiginous ulceration occurring on or near the genitals, although not necessarily confined to this site. It is most common to the Negro race, and is prevalent in Egypt, the West Indies, and other tropical areas.

The lesion is most commonly confused with that of lues, but many cases treated for carcinoma have doubtless been venereal granuloma. It is common information that confusion occurs between this disease and decubitus, second and third degree burns, tuberculosis of skin, gangrene, and diabetic skin lesions. The etiology is doubtful, but its marked contagiousness is evident. The diagnosis of this condition, therefore, is not simple, but depends upon ruling out other disorders. Darkfield, Wassermann, and other clinical signs rule out syphilis. Carcinoma cannot easily be discarded by biopsy, for here the tissue appears grossly similar to a malignant disease and histologically is said to show granulation changes with papillary elongation and some rete proliferation. The decision in the differential diagnosis is usually based on history, clinical findings, and therapeutic results.

*Briggs, Paul R.—Assistant Resident Surgeon, Soldiers Hospital of Connecticut. For record and address of author see "This Week's Issue," page 358.

The disease usually begins as a papule or pustule which breaks down to ulcer formation. This ulcer takes on a serpiginous character, its edges become undermined, and there issues a foul and dirty discharge from its base. There is usually a complaint of pain, according to some observers[1], loss of appetite, and weight. There is often history of sexual intercourse of a promiscuous nature. The Wassermann and darkfield examinations are negative unless the patient already has lues. The therapeutic test may be carried out with an antimony compound, such as antimony potassium tartrate (tartar emetic), or Fouadin (sodium antimony iii biscatechol disulfonate of sodium). These antimony compounds usually start repair granulation after three or four injections of therapeutic dosage and the diagnosis is established.

REPORT OF A CASE

A white male, aged 34 years, was admitted to the Soldiers Hospital, Norton Heights, Conn., February 13, 1934, with a large ulcer on the penis, of irregular shape and discharging a foul ropy material. He complained of pain at the site of the lesion, loss of appetite, and loss of weight. There was a history of sexual intercourse one month before the lesion appeared as a small papule. The papule broke down to ulcer formation, and patient immediately consulted a physician who sent him to a local hospital for treatment. The patient was discharged from the local hospital seven days after admission and no positive diagnosis was established.

Upon entering our hospital two Wassermann and Kahn tests were carried out, with negative results. Two darkfield examinations were undertaken, with similar response. Two weeks after admission this patient was given injections of neoarsphenamin, intravenously, and potassium iodide, orally, without improvement. A culture was then taken from the ulcerated area, and revealed diplococci and diphtheroids, with the type undetermined.

Forty-five days after admission it was noted that the ulcer became larger and a second ulcer was forming. The relationship to Granuloma Inguinale was then recalled and the use of tartar emetic was instituted (5 cc. of 1 per cent solution every third day). After the second injection, both of the ulcers showed signs of healing. The entire area was completely replaced by healthy tissue at the end of the fifteenth injection. The patient evidenced no idiosyncrasy to the drug, and systemic symptoms such as pain, loss of appetite and weight, disappeared directly after the second injection.

One month after treatment with tartar emetic had been suspended, a recurrence of the condition (at another site) was noted. Fouadin was administered intramuscularly at intervals of two days for eighteen doses, and the second ulcer healed completely with no recurrence of the lesion.

CONCLUSION

From this single case of granuloma inguinale we have derived the following:

(1) Cases of this type are often mistaken for other diseases, and granuloma should always be in a practitioner's mind when treating any type of skin lesion that appears refractory to the ordinary forms of treatment.

(2) Granuloma, although rare, does occur in New England.

(3) The condition occurs in the white race and is not confined entirely to the Negro.

(4) Tartar emetic is an efficient form of treatment when supported by local antisepsis, but is surpassed by Fouadin, in that recurrence is less likely to occur with the latter drug.

(5) The disease is contagious and can be transmitted by sexual intercourse.

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PATELLAE BIPARTITE

BY LEMUEL DAVID SMITH, M.D.*

MY interest in this subject was aroused by Salmond who wrote on "The Recognition and Significance of Fractures of the Patellar Border." In a routine examination of a number of knees, he found eight patellae with fissures in the outer border or at the external superior angle of the patella. He stated that the position corresponded to a line of tension of an overstretched articular capsule in lateral bowing or to the pull of the vastus externus, and resembled the marching fracture of the metatarsals. In these cases there was no history of trauma. They occurred in either patella or both, the condition complained of was pain in the region of the inner border of the patella. The fissure direction was longitudinal or obliquely downwards but not transverse as in the usual muscular fracture. Adams and Leonard observed the same phenomenon and concluded it to be a developmental anomaly. They found the fissure line to be in the outer and upper quadrant. As an aid to differentiation of this condition and fracture, they found that fracture of the patella did not occur in this region and that the condition was bilateral. A later series by Lapidus presented thirteen cases of fissure in the lateral and middle quarters, longitudinal, and in the sagittal plane. He reported them as fractures not so uncommon as usually believed. He stated the clinical picture to be clear cut, i.e., history of injury, localized tenderness over the lateral border of the patella, effusion in the joint, comparatively negligible disability. He suggested a special technique of x-raying the patellae, which we have been using for some years, in order to more clearly exhibit the condition.

*Smith, Lemuel D.—Member, Attending Staff, St. Anthony's, Misericordia, Milwaukee Children's and Milwaukee County General Hospitals. For record and address of author see "This Week's Issue," page 358.

Baudet reported an injury case to a knee in a young soldier, in which x-ray revealed fissure lines in both patellae in the superior external angles with complete detachment of the lateral bony fragments. He considered the condition to be not only an anatomical curiosity, but warned that the anomaly should be known by experts if they wish to avoid confusing it with partial fracture of the patella.

Mouchet referred to the condition of bipartite patella of developmental origin more commonly unilateral. He stated that, in case of traumatism, bilaterality is a sign of value in excluding partial fracture, but unilaterality does not exclude anomaly.

Baudet observed that the fissure line in these cases was in the superior external angle. Köhler of Wiesbaden showed a double osseous nodule at the superior external angle of one patella and a single nodule in the other. Mouchet insisted on a radiological technique of placing the subject on his stomach, the patella on the plate, the knee externally rotated and the patella displaced outward. A plate made thus permits the greatest visualization of the multipartite patella.

Of considerable significance in consideration of multipartite patellae are the observations of Kempson and Wright, one writing in 1902 and the other in 1903. Kempson in his dissection noticed an emargination or indentation of some patellae on the upper and outer margin. He found this condition present also in an Egyptian mummy. Wright a year later noticed the same condition and in addition mentioned a case of a secondary or accessory patella in the same quadrant. It may be mentioned here that Köhler presented a case of Osgood-Schlatter's disease in which this same emargination or in-

dentation obtained but in the region of the anterior tibial epiphysis.

Wenzel Gruber of St. Petersburg (Petrograd) recorded an accessory patella in the upper and outer quadrant and gave it the name of "patella bipartita". Joachimstal, in 1902, so far as I can determine, made the first roentgenographic study of the condition and he considered it to be a developmental anomaly. Following this publication there have been numerous contributions to the subject with various opinions as to etiology, some suggesting surgical procedure for the "repair" of partite patellae. One member of my series, an adult female with a large multipartite patella, had had it treated for fracture at various times.

Neviaser reported it as a developmental anomaly frequently diagnosed erroneously as a fracture and summed it up with the conclusions that there are bipartite patellae and that the condition is a congenital anomaly. Further that its recognition is important for economic reasons as differentiated from fracture, that the fissure line is always in the upper and outer quadrant, that it is nearly always bilateral and that fracture does not occur in this region. Were these latter conclusions true, the problem of differentiating it and fracture would be a simple one.

In my series of twenty-four cases only six were bilateral, four were emarginate, two were frankly transverse, five were multipartite. In one case in a college football player who had injured his knee, there was found a diagonal fissure in the region common in the bipartite patella. I am unable to differentiate fracture and anomaly. Following a period of rest, the fissure line became calcified and disappeared and this was accordingly classified as a fracture. This line was in an unusual location for a patellar fracture and corresponded to the location of seventeen fissure lines in my series of anomalous patellae.

Type I — The common type. The fissure line is in the upper and outer quadrant.

Type II — The doughnut patella, multipartite. This type of patella is larger than its fellow, sometimes twice its diameters.

Type III — The transverse fissure occurs in the lower pole.

Type IV — The fissure line is vertical and is in the outer quadrant. This fissure line may represent a fracture line as may the other types of fissure.

Type V — The Emarginate patella. The Emargination is in the upper and outer quadrant.

In addition to the economic importance attached to this interesting anomaly in its differentiation from fracture, it appears to be linked with a large group of confusing nomenclature. Larsen in 1921 and Johansson in 1922 described some cases of a patellar anomaly in children twelve to thirteen years of age, who developed pain, tenderness and weakness over the patellae following exertion. It was termed epiphysitis. Hawley and Griswold presented some similar cases and gave the syndrome the name Larsen-Johansson's Disease. Here our consideration of anomaly of ossification of the patella leads us to a large group of bone abnormalities with a nomenclature verbose and confusing in the extreme. Köhler had described such a syndrome in the patella in conjunction with a similar condition in the tarsal scaphoid which we know as Köhler's disease or disease of the tarsal scaphoid. It occurred in a normal child five to six years of age and the name Köhler's disease of the patella was given to this non-inflammatory, non-infectious derangement in differentiation of this condition in the first decade and "Larsen-Johansson's," apparently a similar condition, in the second decade. It was observed in numerous individuals in association with either Köhler's disease of the scaphoid or Osgood-Schlatter's apophysitis of the tibial tubercle. The last-named syndrome was mentioned by Osgood in 1903 as a non-inflammatory process interrupting ossification in the tibial tubercle and was later discussed by Schlatter who thought it represented an incomplete separation of the epiphyseal process due to the pull of the patellar tendon, occurring more frequently in boys and from the tenth to the fifteenth year. The roentgenograph finding in well-defined cases is described as showing a marked displacement forwards of the nucleus of the tubercle.

From ten to thirteen years there projects from the upper tibial epiphysis, normally, hanging like a tongue in front of the diaphysis a tongue-shaped process. At its distal extremity there then appears an isolated osseous nucleus, the anterior epiphysis, which later becomes the tubercle and forms a bony union with the upper epiphysis about the fifteenth year of life.

Numerous causes of this syndrome have been

brought forward, local infection, rickets, endocrine disturbance, etc. And to increase the confusion, the x-ray findings described above are observed in numerous individuals without any symptoms. One case, a twenty-three year old doctor, with acute clinical symptoms of this syndrome, presented a complete absence of ossification of the tuberosity which resembled the emarginate patella described above.

		Bipartite	Multipartite	Emarginate	Fracture	Monolateral	Bilateral	Type	Sex
1.	Kn.	L				L		I	M
2.	Lo.	R			+	R		IV	M
3.	Kl.	R				R		I	M
4.	We.			+		L		V	M
5.	Da.		L			L		II	F
6.	Gr.	R & L	L				+	I & II	F
7.	Si.	R & L					+	I & I	M
8.	Ze.	R & L					+	III & III	F
9.	Pr.			+		L		V	M
10.	St.	R				R		I	F
11.	Ho.	L				L		I	M
12.	Pi.	R				R		I	M
13.	Sc.	R & L					+	I & I	F
14.	An.	R		+		R		V	M
15.	Va.	R		+		R		V	M
16.	St.	L				L		I	M
17.	Kr.	R & L					+	III & III	F
18.	Gr.		R & L				+	II & II	F
19.	Mo.	L				L		I	M
20.	Wi.		L			L		II	F
21.	Tr.	R & L					+	I & I	M
22.	Ma.	L				L		I	M
23.	Wi.	L				L		I	M
24.	Kr.	L				L		I	M

Twenty-four patients exhibited thirty-one fissured patellae, one of which, type IV, No. 2, proved to be a fracture.

Type I	17	patellae in	13	patients.
Type II	5	" "	4	"
Type III	4	" "	2	"
Type IV	1	" "	1	"
Type V	4	" "	4	"

Male 15, Female 9.
Right patellae 13, left patellae 18.
Bilateral 7, Monolateral 17.

In this category one's attention is carried to Legg's disease of the hip. Legg's (Calvé-Perthes') disease was described by each of these men and then by Waldenström and is known by each of these names as well as by the names osteochondritis coxa juvenilis, osteochondritis deformans, osteochondritis deformans juvenilis, coxa plana, pseudo-coxalgia, osteochondritis of the hip, osteochondral trophopathy, etc. This condition occurs more usually in boys and more frequently between the third and twelfth years. The changes here are characteristically in the femoral epiphyseal neck and sometimes in the acetabulum. The epiphysis shows several pieces, division, fragmentation and flattening. Legg described a cap and a mushroom type. The term osteochondral trophopathy which Legg applied to it is probably the key to the etiological process of this and allied conditions. He has maintained from the beginning that the disturbance was locally nutritional with a primary traumatic agency. Here it may be interpolated that Froelich's syndrome, i.e., femoral cervical coxa vara, is coincidental with increase of body weight on the capital epiphysis at the period of its greatest growth and therefore its greatest weakness. A similar condition in the spine has been described by Scheuermann and thus we are confronted with a Scheuermann's disease in which the histopathological changes are similar to those in Legg's, Köhler's and Larsen-Johansson's disease. Mau stated that the vertebral bodies have two periods of active growth.

In the new-born the vertebrae are ossified in

their principal parts including the transverse processes and articular parts of the arches. This ossification begins in the third fetal month. Growth activity is retarded at the age of six years until the appearance of the secondary centers five to six years later, when there appear formations of disc-shaped plates well marked at the vertebral margins. Little granular deposits of lime appear in the tenth to the eleventh year in the hyaline cartilage covering the upper and lower surfaces uniting in the twelfth to the thirteenth year to form calcareous plates which ossify. Union with the body is affected in the twenty-second to the twenty-fourth year.

"Scheuermann's syndrome" occurs in the second decade, principally in the male in which degenerative changes take place in the epiphyseal discs or plates; wedge-shaped deformity of vertebral bodies occurs varying in degree, in some cases arousing suspicion of Pott's disease. Scheuermann's syndrome pertains to the period of activity in the secondary centers of ossification. Calvé pointed out that a similar condition obtains in the young before the appearance of the epiphysis which he called infantile osteochondritis producing a greater degree of deformity than does the secondary type. Another syndrome resembling somewhat this condition in its insidious onset and in the wedge-shaped deformity of the centrum occurs at any age period and following some previous trauma perhaps unrecognized at the time. This is the so-called railroad spine of Kümmell's disease in which the vertebral compression or mushrooming does not occur at the time of the original injury but develops slowly following it. Schmorl has described the invasion of the centrum by cartilage cells of the intervertebral disc following compression of the spine. The question arises if there is any relation between these various clinical entities and if there is any correlated significance in the multipartite patellae. These lesions appear to have a similar onset and course. With the exception of Kümmell's syndrome, they appear to be non-inflammatory derangements of bone growth at the various ossification centers during their greatest developmental activity and each lesion is associated with a definite age period. That trauma plays an important or essential part in its initiation appears evident.

Rapidly growing bone cells are physiologically weak. If at a time of growth a static unbalance obtains from increased stress or decreased resistance, a disturbance of growth may occur.

Von Axhausen's suggestion of aseptic embolism necrosis and minute discontinuity of osteochondral substance following slight trauma has much to recommend it and would bring the railroad spine into the group and also a certain type of so-called hypertrophic arthritis. Osteochondritis appears to be a general term under which these various conditions may be grouped and also appears to render the phenomena intelligible. Such osteochondritis has been found to obtain in practically every ossifying center or region in the body that is subject to stress or strain. Thus we may, if desired, dispense with the various and confusing terminology such as Osgood-Schlatter's tibial tubercle, Köhler's tarsal scaphoid, Legg, Calvé-Perthes, Waldenström disease of the femoral head, Freiberg's infraction of the head of the 2nd metatarsal, also called Köhler's disease of the metatarso-phalangeal joint, Köhler's primary disease of the patella, Larsen-Johansson's secondary disease of the patella, Calvé's primary vertebral epiphysitis, Scheuermann's secondary vertebral epiphysitis (these latter vertebral osteochondritides are also known under the names of Delahaye and Buchman), Friedrich's disease of the clavicle, Lewin's osteochondritis deformans juvenilis of the shoulder, Severs' disease of the os calcis or apophysitis, Panner's elbow, etc.

SUMMARY: There is a disease common to all osteochondral growth regions more especially to centers of ossification.

Rapidly growing bone cells are physiologically weak.

If there be a discrepancy between dynamic demands and statical adequacy, the greatest changes would take place in the region of growing bone cells. Pressure due to disadvantage of joint mechanics, excessive ligamentous pull, excessive leverage compression on osteochondral tissue may cause minute compression fractures bringing about disturbance in the nutrition of the part.

Several centers of ossification may appear where usually one occurs.

These may coalesce or remain distinct throughout adult life. During the growth period several centers of ossification multiply the cellular activity and increase vulnerability to injury over that common to one center of ossification.

Osteochondritis may be a clinical entity in the absence of an observable center of ossification.

Multiplicity of ossification centers is often exhibited without clinical manifestation.

Persistence of separate centers of ossification may obtain. Such a condition in the patella constitutes multipartite or accessory patellae. The fissure lines in such a case are usually in the upper and outer quadrant. They may be in any plane in any direction.

Bilaterality cannot be depended upon to differentiate the condition and fracture.

A fracture line while rare in the outer and upper quadrant does occur here.

There are medicolegal aspects as well as surgical considerations involved in differentiation of fracture and accessory patella.

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RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS FOR JANUARY, 1935

MONTHLY REPORT FOR JANUARY, 1935

Disease	Jan., 1935	Jan., 1934	5 Yr. Average*
Anterior Poliomyelitis	2	2	4
Chicken Pox	1901	1649	1642
Diphtheria	35	72	270
Dog Bite	450	340	320
Epidemic Cerebrospinal Meningitis	4	6	10
German Measles	809	47	72
Gonorrhea	468	516	576
Lobar Pneumonia	692	710	678
Measles	1246	6069	2382
Mumps	303	651	834
Scarlet Fever	776	1028	1523
Syphilis	410	372	420
Tuberculosis (Pulmonary)	298	319	340
Tuberculosis (Other Forms)	32	47	43
Typhoid Fever	6	4	14
Undulant Fever	1	1	
Whooping Cough	839	1759	1184

RARE DISEASES

Actinomycosis was reported from Boston, 1; Fitchburg, 1; total, 2.

Anterior poliomyelitis was reported from Gloucester, 1; Waltham, 1; total, 2.

Dysentery (amebic) was reported from Boston, 1.

Encephalitis lethargica was reported from Springfield, 1.

Epidemic cerebrospinal meningitis was reported from Brockton, 1; Cambridge, 1; Chelsea, 1; Worcester, 1; total, 4.

Malaria was reported from Boston, 1.

Pellagra was reported from Boston, 1.

Septic sore throat was reported from Attleboro, 1; Boston, 4; Cambridge, 1; Everett, 3; Framingham, 1; Gardner, 1; Waltham, 1; total, 12.

Tetanus was reported from Springfield, 1; Woburn, 1; total, 2.

Trachoma was reported from Boston, 1.

Trichinosis was reported from Adams, 3; Belmont, 1; Boston, 1; total, 5.

Undulant fever was reported from Boston, 1.

Diphtheria initiated the new year with a reduction of 51 per cent over January of 1934.

Typhoid fever remained well below the previous five-year average.

Lobar pneumonia reporting showed nothing remarkable in spite of the usual winter prevalence of grippe-like infections.

German measles and chicken pox continued to give evidence of increased incidence while measles remained low with the exception of a few communities.

Anterior poliomyelitis, epidemic cerebrospinal meningitis and tuberculosis other forms were reported to about normal expectancy.

Pulmonary tuberculosis, scarlet fever, whooping cough, and mumps showed a reduction in reported morbidity over last year's figures.

*Based on the figures for the preceding five years.

NEW HAMPSHIRE MEDICAL SOCIETY

THE DIAGNOSIS AND TREATMENT OF BREAST LESIONS*

BY FRANK E. ADAIR, M.D.†

YOUR program committee has asked me to speak on "Diagnosis and Treatment of Breast Lesions." When we consider the large incidence of breast lesions, it seems highly fitting that a large group of physicians such as this, should occasionally scan the entire subject.

During 1933, there were reported in the United States Continental area (except Utah) 128,475 cancer deaths. It is usually estimated that there are twice as many patients living with cancer as those who died for any given year; therefore there must be about 257,000 patients living with cancer within the United States. It is believed that the number of patients with benign tumors equals the number with malignant tumors. In this case there is a total of approximately 514,000 patients living within the United States who have either a benign or a malignant tumor. By incidence the gastro-intestinal tract comes first; the female generative tract second; and the breast, third. In the breast we are therefore dealing with tumors which occupy a relatively high incidence in oncology.

1. CARCINOMA

The diagnosis of breast tumors is becoming increasingly difficult because the patients are coming earlier than ever before, bringing lesions so small that the signs of malignancy have not as yet developed. This is especially true in women whose age lies between thirty and forty years. At this age, the diagnosis of an early cancer of the breast is commonly confused with that of fibro-adenoma, or cyst or a localized area of mastitis. Every case presenting herself with a lump in the breast, brings up the problem of the diagnosis of cancer, fibro-adenoma, cyst and mastitis. Each must be considered carefully, the data favoring each tumor weighed, accepted or rejected. The diagnostic points in favor of *early* cancer are, delicate attachment to the overlying skin (this is the earliest sign); slight deformity of the breast contour; nipple attachment; then later nipple retraction; hardness of the tumor; solitary character of the tumor; age of the patient, etc. The *later* signs such as peau d'orange appearance, the presence of axillary nodes, ulceration, etc., are manifestations which we employ to fortify our clinical impression of the lesion.

*Read at the Annual Meeting of the New Hampshire Medical Society at Manchester, May 16, 1934.

†Adair, Frank E.—Executive Officer and Attending Surgeon, Memorial Hospital. For record and address of author see "This Week's Issue," page 358.

2. FIBRO-ADENOMA

The diagnosis of fibro-adenoma is usually not difficult. The tumor is *firm*, but not stony hard; it is freely movable within the breast; has no skin attachment; is rounded over its dome if near the surface of the mammary tissue; it more frequently occurs in women in the earlier years, rather than in older women. Although the diagnosis is not difficult one must never promise any woman whose age is between thirty and forty years, that the lump will not prove malignant even though the clinician may be convinced that he is dealing with a fibro-adenoma, because he may occasionally find himself in an embarrassing position.

3. CYST

A solitary cyst is difficult of diagnosis if it is less than two centimeters in diameter, because it is so tense and firm that it is not easy to distinguish it from a fibro-adenoma. Furthermore, a cyst many times becomes slightly attached to the overlying skin, which forces one to consider carcinoma. The most valuable aid to the diagnosis of a suspected cyst is to introduce an aspiration needle. This simple aid should be used much more than is the common practice.

4. MASTITIS

Localized mastitis is difficult of diagnosis. It occurs more commonly in women under fifty-five years of age, than over that age. The lesion is very firm; it has over its surface, rounded small nodulations; the outline of the edge is less discrete than either the cyst or fibro-adenoma; it moves freely *with* the breast but usually *not within* the breast; it is sometimes multiple, but if multiple the diagnosis is much simpler. The area of mastitis should be removed for two reasons: first, to establish the diagnosis and, secondly, to be sure that a small area of cancer does not lie in the center of the lesion. The latter is not uncommon.

Mastitis should be subdivided for diagnostic purposes into:

(1) *Cystic and fibrous mastitis.* The diagnosis of mastitis of these types is made on the rounded, irregular bosses; indefinite outline of the mass; the firmness of the lesion; and the multiplicity of lesions.

(2) *Tuberculous mastitis.* The diagnosis of this condition is made on multiple sinuses; the softness of the lesion, the nature of the dis-

charge which is serosanguineous, and the chest plate which usually reveals pulmonary tuberculosis.

(3) *Luetic mastitis.* This condition is diagnosed usually by suggestions from other luetic signs of the body. The gumma is a localized sharply defined tumor of the breast which later softens; it has a dusky appearance. The serological test is of assistance.

(4) *Plasma-cell mastitis.* This lesion gives a characteristic history and has the general clinical signs of cancer. The preceding history is that sometime during the course of lactation a mass developed in the breast; it was red, slightly tender and subsided partially but not completely, leaving a residual mass which was hard; there was nipple attachment; at times pigskin appearance; deformity of the breast and at times even axillary nodes. The diagnosis is made chiefly on the history. The microscopic appearance of this lesion is also very baffling. There is a heaping up of the duct lining cells, frequently eight or ten rows high giving something of the appearance of comedocarcinoma. There is a marked infiltration with the plasma-cell in broad sheets and there is present also a large number of giant cells. Even in the hands of a very experienced pathologist the diagnosis is difficult to distinguish from cancer.

5. TRAUMATIC FAT NECROSIS

This lesion simulates carcinoma in appearance and in its clinical characteristics. The diagnosis is made largely on the history of a severe injury. This lesion occurs only in people who are corpulent. When Lee and I first described this tumor the average weight of our cases was 168 pounds. They gave the history of having had a severe fall such as was reported by one case who fell down a flight of stairs holding a picture frame in her arms in such a way that a hemorrhage took place within the breast substance. Several of the cases had previously been operated on and hypodermoclysis needles had been inserted into or beneath the breast, puncturing a vein. It seems that in all cases we were dealing with hemorrhage into fat tissue, which in later years resulted in fibrosis locally and at times calcification. The breast had the clinical appearance of cancer such as attachment to skin, retraction of the nipple, hardness of the lesion, etc. Only by the history can the diagnosis be made.

The malignant tumors of the breast are divided into sarcoma and carcinoma.

Sarcoma. The diagnosis of sarcoma of the breast is usually a simple matter. In general there are two types of sarcoma: first, the true sarcoma of breast which results from a pre-existing fibro-adenoma. In this case there is nearly always the preceding history of the presence of a tumor for many years, which under some unknown influence takes on the property of rapid growth. The tumor reaches very large dimensions and invades the skin. Central necrosis results in softening and ulceration of the lesion. The diagnosis in this case is made chiefly on the history of the preëxisting tumor together with rapid and bulky growth.

The second type of breast sarcoma which is probably equally common, is neurogenic sarcoma. It is found at the site of the breast, not because it is a true tumor of the mammary tissue but because it happens to be at the site of the breast. Neurogenic sarcomas occur anywhere in the body and are derived from the nerve sheath. The tumor is very firm but not so hard as carcinoma. The treatment for sarcoma is a wide mastectomy. A radical amputation is not necessary as they do not metastasize to the axilla. They metastasize to the lungs.

Carcinoma. There are several types of carcinoma of the breast each type having its own clinical characteristics, life-history, response to irradiation, and to surgery. Each type has a different prognosis. To-day we are thinking in terms of grades of malignancy. Each carcinoma falls into one of four grades; Grade I representing a slowly growing tumor, very late to metastasize, lending itself more readily to complete cure. Grade IV represents a highly malignant type which grows rapidly, metastasizes early and widely, and has a poor prognosis. Between Grade I and Grade IV lie all variations.

(1) The scirrhous carcinoma or fibrocarcinoma is characterized by a puckering of the skin, a pulling in of the nipple, deformity of the breast and extreme hardness. This tumor frequently remains localized for years. It is slow to metastasize and even spontaneous cures take place. The treatment for scirrhous carcinoma is radical amputation.

(2) Adenocarcinoma. This tumor is also of a comparatively low grade of malignancy but a higher grade than scirrhus. It gives the reverse appearance from scirrhus. The lesion is localized, it bulges, there is a dome-shaped contour, it is localized for a long time, later breaks down, ulcerates and gives the appearance of being a very bad type of carcinoma. Metastasis to the axillary nodes although late in the life history, when once this occurs represents as serious a phase as infiltrating carcinoma of other types. The prognosis for adenocarcinoma is good by radical surgery when confined to the breast. Frequently the prognosis is very good even after ulceration has occurred.

(3) Duct carcinoma. This lesion invades the entire mammary system usually involving the entire breast. It is the comedocarcinoma; and remains within the mammary field until it begins to invade through the basement mem-

brane at which time there is a large bulk of carcinoma. This type frequently does not disturb the contour of the breast and the carcinoma in certain stages of its development is frequently overlooked. Later there is nipple retraction, skin adherence and in this type we usually get the characteristic pigskin appearance. The prognosis in duct carcinoma is more serious than in scirrhus or adenocarcinoma; therefore the radical amputation should have a much wider skin excision than most other types.

(4) Sweat gland carcinoma. This tumor is characterized by its eccentric but characteristic position at the periphery of the breast, more commonly situated in the mammary fold. In reality it is an adenocarcinoma variety. It has a rounded contour. The life history is similar to that of adenocarcinoma. The microscopic appearance is very characteristic as the cells take only the eosin stain. The treatment is the same as that of adenocarcinoma.

(5) Papillary cyst-adenocarcinoma. This variety frequently is responsible for serosanguineous discharge of the nipple. In its first stage, the tumor commences in one of the terminal ducts as a benign *papilloma*, more commonly situated in the ampulla at the edge of or within the areola. The tumor remains benign for many years. In my series of 108 cases of bleeding nipple I have found that the papillary cyst-adenocarcinoma was accompanied by bleeding from the nipple on an average duration of twelve years. The benign papilloma continues to grow and later invades the basement membrane infiltrating the surrounding tissues becoming a true carcinoma. It is of a comparatively low-grade type in the scale of malignancy. Like most mammary carcinomas after the axilla has once become involved, it offers a bad prognosis.

(6) Gelatinous carcinoma. The gelatinous carcinoma is an insistent variety. It is of low grade and easily cured by a radical mastectomy; or even by a local mastectomy if early. But if recurrence takes place the prognosis is grave and the patient frequently loses her life many years later after the first appearance of the tumor. Irradiation has very little effect in controlling this tumor, and the treatment lies in amputation.

(7) Anaplastic types of carcinoma. This variety is one difficult of diagnosis as the small tumor is commonly mistaken for a fibroadenoma. The tumor has practically no supporting structure of fibrous tissue, but is composed chiefly of very highly malignant, loose, rapidly growing cancer cells. Although the tumor may be but one centimeter in diameter it is not uncommon to find evidences of bony metastasis through the spine, femora and pelvis at the time when the patient first presents herself. This tumor although highly malignant is extremely radiosensitive. It is a Grade III or IV on the scale of malignancy. Theoretically this tumor should never be operated on until after there has been a pre-operative course of irradiation; but, since the diagnosis is so difficult, this variety usually receives very poor diagnosis and treatment and the mortality is very high. The metastatic areas in the bone are likewise radiosensitive and irradiation occupies probably the most important position in therapy for this variety.

(8) Inflammatory carcinoma. The type has a characteristic clinical appearance. The carcinoma invades the dermal lymph spaces so that the skin involved over the breast has a sharply defined edge. There is an elevated local temperature. The appearance is that of erysipelas. The dermal lymph spaces are plugged with small rapidly growing carcinomata. The lesion spreads rather promptly—concentrically—from the breast so that at times even the opposite breast, opposite shoulder or the back is involved. Surgery should never be employed in this type of case as it is impossible to get around the lesion by surgical methods. Irradiation is the therapy of choice. The prognosis is extremely grave.

If we have a full understanding of the various types of benign and malignant tumors, the treatment will be much better planned, the results improved and the salvage of human life greater, than heretofore.

DISCUSSION

PRESIDENT GRAVES: The discussion of this paper will be opened by Dr. George C. Wilkins of Manchester.

DR. WILKINS: *Mr. President and Members of the New Hampshire Medical Society*—I wish to thank Dr. Adair for this most adequate, and comprehensive discussion of carcinoma of the breast. Dr. Adair has had a very wide experience, a long experience in a clinic that is one of the largest in the United States.

I have seen an innumerable number of these unfortunate patients. What are we going to do with our cases which, in comparison, are occasional and not regular? In the first place, we must make an examination in order to settle the question of diagnosis. The examination should always be done with everything removed down to the waist, with the patient lying down and also with the patient sitting. It is quite possible that there may be a tumor in the breast discovered by palpation of the breast between the thumb and finger, the patient in a sitting position. The normal breast may sometimes feel knobby. But when that patient is lying down flat, and the breast is palpated with the flat of the hand, that feeling of tumor formation disappears, and for this reason, that type of examination should be given to every patient who has a possible tumor of the breast.

If, when this patient comes to you, the diagnosis cannot be made, the patient is very fortunate, because if she comes to you before a diagnosis can be made, it means, even if it is cancer, that the patient has come for advice early enough to expect a cure, if she accepts the proper treatment.

If, in examining patients of this type, and, as a result of the examination, you find that a patient has no tumor, she should be treated with much consideration, and congratulated because she came. Never laugh at a patient because she comes for an imaginary tumor in the breast. Unfortunately this does occur, because I hear of it. It is an unfortunate thing because it frequently keeps the patient from returning to the same physician or going to another when she may have an actual tumor.

In making the actual diagnosis between benign tumors and malignant tumors, it is sometimes quite difficult and not so easy as it might have appeared from some of the facts Dr. Lewis told us this morning. But, if there is a question of diagnosis, a biopsy should be made, either by the methods described by Dr. Adair, or by removing the entire tumor. If there is a question of malignancy which we are not sure of, it means that the tumor would be smaller, so that that tumor could be removed and sent away for examination before a radical operation is performed.

It is a misfortune in this state that we have so few resident pathologists. But, with our state laboratory set-up at Hanover, and with two resident pathologists working all the time, it is possible for any of you to have a report in twenty-four hours, and it is much to the patients' advantage to give them this service rather than to guess at the diagnosis and perhaps perform an unnecessary operation. There seems to be no danger in removing a tumor, if it is removed entirely.

Several observers who have long series of operations to their credit, have stated that the cases in which a preliminary removal of a small tumor was made had not jeopardized the life of the patient afterwards, or the proportion of cures. Many of these tumors which we are not sure of can be removed without an obvious scar by making the incision along the under side of the breast, lifting the breast up and cutting the tumor from the under side. If this is not cancer, then there is no marring or scarring of the patient's breast.

Now, as to operation, cancer of the breast is essentially a disease which should be attacked by operation, aided by x-ray, but the operation, if it is cancer, should be thorough, with a complete removal of the skin, the pectoral muscles and deep fascia and the axilla contents, and it has been well said by some one in the past that there would be more cures of breast cancer if two men participated, the first man to make the incision as wide as he thought it ought to be and then some one else to make it wider. We possibly leave more skin than we should, at times.

A radical operation for even the smallest malignant growth is necessary, because it is possible to find a larger nodule in the axilla than the primary tumor that is in the breast.

The method of operating, I was going to say, *makes* very little difference as to the line of incision, but after seeing the pictures which Dr. Adair has shown, I will modify this by saying that any reasonable method of approach is satisfactory.

Speaking of the necessity of thorough operation, I want to cite to you one patient who came to the Elliott Hospital Cancer Clinic two weeks ago, with a history of having entered another hospital one year ago, with a diagnosis of carcinoma of the breast. That breast was removed, and within six months, there was a recurrence with metastases, the recurrence appeared on the chest wall. In getting the history of that operation from the hospital, it was shown that a preoperative diagnosis was carcinoma of the breast. Operation was performed, with a removal of the breast and the fascia of the pectoral muscle, nothing else. At the time she appeared before us, there were two large nodules in the skin, and a large nodule in the axilla. I am citing this case simply because it would hardly seem possible in this day that any one would perform an operation that I presumed had been given up thirty years ago. This type of operation is inadequate, and we can expect nothing in the way of lowering the cancer death rate in the State of New Hampshire, so long as that sort of work is carried on.

In regard to the operation, I want to speak of electric coagulation, not for the cutting work of the operation because I think that is very much over-rated. I think the cold knife is just as well, and there is no more chance of spreading. But by touching the hemostats that have been put on to the bleeding vessels at the end of the operation, the elapsing time of your operation can be very much shortened by touching the hemostats with the coagulating point quickly and removing them.

After operation, I believe in early mobility of the arm. The arm should not be fastened to the side, other than loosely, for twenty-four hours. After that, the patient should be encouraged, not forced, to use her arm. So that in four or five days, she should be able to put her hands above her head. If that is done persistently, the patient will have the use of her arm as before.

The value of x-ray treatment has been questioned by some, but after what Dr. Adair has said about it, I think there should be no argument. Personally, I feel that if there is any question of preoperative and postoperative treatment, that postoperative is better, chiefly because there is such a thin wall and so little tissue after operation.

The value of x-ray in the recurrent cases is most stupendous. Any recurrences can be taken care of, and the life of the patient made very much more comfortable. No operation should be attempted with the recurrent appearance of cancer.

Dr. Simmons of the Massachusetts General Hospital has shown that the results of operation in the cases analyzed, and where the cancer was confined to the breast, are sixty-four per cent living after five years, which is a little less than the figures given by Dr. Adair at the Memorial Hospital. With axillary nodes, Dr. Simmons reports twenty-six per cent.

There is the difference between the early attack on cancer of the breast and the late attack, and for this reason, we must continue to investigate the importance of early diagnosis, wherever we come in contact with patients, and to advise frequent examination. We must teach women also that the painless lump in the breast is the one to beware of, and furthermore, that all tumors of the female breast should be removed. I thank you.

PRESIDENT GRAVES: The discussion will be continued by Dr. Gile of Hanover.

DR. JOHN F. GILE: *Mr. President and Members of the Society*—I think that after Dr. Adair's very fine presentation of the subject, anything I say would be simply a repetition of the points that have been taken up.

As has been emphasized so many times and repeated here to-day, if patients would come for early examination of breast tumors, our cures would be greatly increased. The education of the public and the attempts made along this line in the past years by medical societies certainly constitute a step in the right direction. On the other hand, patients still come to us with a lump in the breast of months' or years' standing, with the story that they saw their doctor, but were told it was nothing to worry about and to simply watch it until it gave

trouble, with no particular indication as to just what that trouble might be, forgetting completely that a tumor alone is all the symptom necessary for a complete study. On the other hand, we have seen a very few patients who would not take this advice, and have immediately gone for further advice. A routine health examination, if it, as it should, includes a careful examination of the breast, would bring earlier cases to treatment.

Our last case of cancer of the breast was in a woman who had been in the hospital for some days with an acute illness, and in whose general physical examination a lump was found, of which she had no knowledge, and which later proved to have also axillary involvement. Our experience is that few women ever examine their own breasts, and when a lump is found, it is often just chance that led to its discovery. Often, the history is that in using a towel or adjusting the clothing the lump was noticed. It is still hard to get people to believe that cancer can be present without soreness, pain or discharge from the nipple.

Dr. Donchess, who is working in Dr. Kingsford and Dr. Miller's laboratory in Hanover, has been making a study of cancer of the breast as it has occurred in this state. His work is not ready for publication, but he kindly gave me the following figures which are of some interest in that they give a little idea of our local problem. In the past thirty-six years, there have been 1742 tumors of the breast examined in the laboratory, of which 742 were malignant. During the past year, there has been an incidence of 141 examinations of the breast, with 72 malignancies. This latter figure, Dr. Miller tells me, is just about the incidence the country over of malignancies in relation to total breast examinations.

Recently, there has been considerable work on the x-ray appearance of various tumors of the breast. Dr. Sycamore, the roentgenologist at Hanover, has been making a study of these during the past three years, but we are not prepared to draw any very definite conclusions as to its value, and our final diagnosis rests on the diagnosis by the pathologist at biopsy.

We believe that a tumor of the breast that has all the textbook and classical signs of malignancy, and can be diagnosed one hundred per cent is, of course, hopeless. The more small tumors we see the more hopeless we find diagnosis without biopsy. We will do no type of operation on these cases without biopsy by the pathologist. Our method is to try and remove the whole tumor and to depend on the frozen section in practically one hundred per cent of cases. We have never tried aspiration or the punch in tumors located within the breast. Occasionally, we have the satisfaction of seeing a woman in whom we can find no tumor, who insists that there is one present. This is particularly the one which should be investigated, for removal means cure, if malignant.

With the increased number of cases coming for diagnosis and treatment, we are obligated to give them careful consideration, and after treatment not to forget that follow-up and evaluation of the methods used are necessary in order to reduce the morbidity and mortality in this dread disease. I thank you.

PRESIDENT GRAVES: The subject is now open for general discussion.

DR. LUCE: I would like to make a suggestion. I was brought into the practice of medicine in the Gay Nineties, and there was a period from 1892 to 1898, when the popular abdominal section was done in the big hospitals in at least two out of every three cases. That was supposed to be the "cure-all". I remember one operation where the incision was made in the anterior vagina, the ovaries were brought down and a right angle clamp put on, on both sides, so that it wouldn't be known that she had an operation.

I wonder why some fellow with money enough to buy postage stamps and a typewriter can't take those old records from some of the hospitals and trace those cases and find what proportion of those women, and there are thousands of them, developed cancer of the breast. Why wouldn't that be worth while for somebody to do this? I should think it would have some bearing on this question.

PRESIDENT GRAVES: Is there any other discussion? If not, we will call upon Dr. Adair to close the discussion.

DR. FRANK E. ADAIR: I have very little to add. Dr. Luce has brought up a very important point, namely, that of the effect of the ovarian hormones on the production of cancer. The American Society for the Control of Cancer has a woman working on this very problem, making a study of all the cases that she can get.

I heartily agree with Dr. Wilkins, about the question of doing the operation with the cutting current or with the cautery. I have always felt that a good, sharp scalpel probably disseminated no more carcinoma than the cautery.

As a matter of fact, what actually occurs when you use the cautery or the electric knife is a question of charring of tissues. If you char too much tissue, the flap will not take. If you don't char enough, you don't accomplish any more than you will with the knife.

Under the microscope, you study a section of this tissue, where the operation has been done with the electric cautery, and you will find a very narrow zone of charred tissue, and you will find also that many times the flaps do not take. So that I use only electrodesiccation, just as you do, in order to save the monotony of tying hundreds of bleeding points.

QUESTIONS BEFORE THE MEDICAL PROFESSION*

BY TIMOTHY F. ROCK, M.D.†

I AM unaware of any peculiar or important scientific achievement of the past year in medicine or in surgery or in the art of practice that would be appropriate for discussion at this meeting or that I might be able to present to you adequately at this time. But other problems of extreme and vital importance, on the one hand allegedly lowering our standing in the profession, and, on the other hand clouding and threatening our future well-being, seem to me to deserve and to require serious consideration and careful planning. I will take but a few moments of your time to bring two of these matters conspicuously into focus with the hope that the first may not be a stain upon our professional ability and that we as physicians, either through our State Medical Society, the County Society, or otherwise, will promptly and with clarity and finality solve the second pressing problem lest it be solved for us to our disadvantage.

The first item constitutes a challenge to those of you who are surgeons in this community and, in fact, to surgeons in the East generally. Two weeks ago the American College of Surgeons convened in Boston. On Sunday, October 21, one of the prominent and influential papers in this State as well as in Boston featured what is supposed to have been an interview with the Director-General of the College. In it the doctor is alleged to have said, "There are some fine men in Boston, good fellows and all that, but if I were to be taken ill here and were in need of an operation, I would go west to have it done. I would fly if necessary to Cleveland, Chicago or Kansas City rather than stay in Boston."

Just think that over. It is a pretty safe gamble that some of our patients will consider it thoughtfully. He would not hop to Nashua or to Manchester or to New York. In effect, it is an indictment against the ability of all of us in the East.

I rather like to feel that this gentleman was misquoted or that whatever he said, and he must have said something, was misinterpreted. I dislike to feel that he intended a slur upon us. Nevertheless, such a statement spread in bold type across the page of a widely read newspaper is distasteful and may well be harmful.

Let us regard it as a criticism that will challenge our very best efforts, stimulate us anew to further study and keener analysis, to better diagnoses and to improved technique. And let us take it as a caution against attempting surgically and unassisted that for which we may be inadequately equipped or insufficiently prepared. Let us continue to be honest with ourselves and with our patients, to have faith in ourselves and in each other to the end that none taken sick in this old State need fly west.

Time marches on. Last week it was announced to the world that the 1934 Nobel prize for medicine had been awarded jointly to three outstanding men of the East, of Boston and of Rochester, New York, for their service to humanity in abating pernicious anemia. Thus, we have an effective antidote for this distressing episode, and New England shall remain the capital of mercy in the world in this field. On life and death occasions comes the test, and our surgeons and physicians shall continue to meet it brilliantly.

Next, we should give thought to the rather violent revolutionary or evolutionary changes rapidly following one upon another, remodeling our country's social order for the better we hope. In this process we have already been affected somewhat and it is idle to assume that we are not headed for greater and more drastic changes. It is accepted that unemployment insurance and old age pensions will be enacted into law probably by the next Congress. I am reliably informed that a committee at Washington is actively engaged at this time in evolving and preparing a plan for nation-wide health insurance. It is not impossible that something will come of it and whether it will be for our good will depend in large measure upon ourselves.

In "Rules and Regulations No. 7", July 1933, of the Federal Emergency Relief Administration, the principle is stated that "the conservation of the public health is a primary function of government". It is upon that principle that are builded the F. E. R. A. activities through the Public Welfare Department in the care of the indigent poor who are also medically needy. In it many physicians profess to see the beginning of state medicine. I do not intend to discuss state medicine. It has its critics and in some countries its advocates, particularly in England where the medical men generally are well satisfied with it.

The present set-up in this state undoubtedly has considerable to recommend it favorably, and, because of it, many of us receive some payment for work which was formerly unpaid. But let us not forget that there are still many newly needy people and former patients too poor to employ the doctor, yet too proud and

*Address of the retiring President of the Hillsborough County Medical Society, at its 30th Annual Meeting, October 30, 1934.

†Rock, Timothy F.—For record and address of author see "This Week's Issue," page 358.

conscious of their self-respect to be upon the Welfare roll, whom we must and will continue to care for loyally and faithfully without charge as we have done in the past and as the Great Physician appointed us to do. It has been estimated that in voluntary free service and non-collectables, the physicians of to-day contribute not less than $1,000,000 a day to charity in this country.

Our anxiety about the present welfare arrangement and whatever similar measures may follow it, is in its administration and in its possible extension through various forms of health insurance to others beyond the indigent poor. Preferably through the State Medical Society, we should see to it that whatever moneys for the care of the sick are devoted from Federal funds or from State or City or other funds should be used primarily for that purpose and that the smallest possible sum should be allowed for overhead expenses, or for the comfort of those who are able to attach themselves to the administrative payroll. It is probably only through such an organization as the State Medical Society that we can be assured that the funds will be impartially distributed among physicians, that only physicians practising in the community shall care for the sick in that locality, and that the established privilege of patient choice of physician shall be continued. We are not ready for dictation, nor is the loyal patient forced upon the Welfare by five years of economic famine yet ready to be told who will care for him in his illness and distress.

We should have assurance that those who are cared for under any Welfare plan deserve it. We realize that there are more millions on "relief" than there were a year ago and more of these people are gradually getting to like it. There seems to be an appalling breakdown in the American spirit of self-help. Our people are being made willing to become "Forgotten Men" so that they may be given security by some branch of the government. Free goods and services never helped build the character of a man, although they may temporarily have relieved his hunger. If one gives a man everything, one takes away his self-respect; and when one takes away his self-respect, he takes away much of character. Nothing is cherished that is free, that involves no cost, no responsibility and no obligation. Since you and I will most surely pay our share in taxes for medical services under Welfare relief, we should see to it that it does not become a haven for hordes of political office-holders unfamiliar with our local problems or abused by the undeserving.

We must also bear in mind and be ever alert against the introduction of free clinics under any and every form of government or health insurance. The danger to our future from this source is well illustrated by the increase of visits to the Out-Patient Department of the Boston City Hospital from 30,000 its first year to more than 500,000 visits in 1933.

Out of these F. E. R. A. and succeeding public welfare practises there is the danger of a demand for the lowering of all medical fees, truly never excessive or in keeping with the time and investment by the physician on the chance that somebody would employ him. It is not inconceivable that those whom we care for under relief for a fee that may barely cover transportation will upon return to work expect or demand our services at the same fee. It is not beyond the realm of possibility that an insurance company would suggest that we treat the victim of an automobile accident who happened to be on relief for the reduced fee under welfare. It is also possible that commercial companies handling workmen's and other forms of compensation will look with envy upon our fees under relief and welfare and try to find a reason to lower our present reasonable charges.

All over the country prepayment hospital and medical insurance plans are in force and their number is increasing with greater rapidity than we probably appreciate. For a moderate sum varying from 20 cents to 50 cents a week, the insured is guaranteed the payment of certain hospital or medical or dental expenses or all three of them.

Such organizations are spreading throughout industry, the employees insuring themselves against medical services. The danger to us in all of these commercial ventures is the setting of medical fees by the insurer, at the lowest rate that any physician in the community will accept, the abrogation of the right of free-choice of physician by the patient and the end of private physician and patient relationships.

The American College of Surgeons has gone on record in favor of periodic prepayment plans for medical service free from the intervention of commercial organizations. But where is the professional organization to-day ready and prepared to function for this purpose? Is there in our state any group of physicians sufficiently interested and willing to give these problems the study required to prepare a plan of periodic prepayment medical service that will serve the patient and the physician rather than profit the shrewd organizer of a business?

It seems to me that our Medical Society, State or County, should promptly and actively engage itself in the proper direction of medical service under F. E. R. A. or the Public Welfare in whatever manner these organizations may be administered to the end that they will function in the best interests only of the needy sick in our State, that they will be officered by citizens of the state familiar with our conditions and our people, and that they will function impartially among physicians willing to serve, without jeopardy to the ethical practise of medicine when economic recovery occurs.

It seems to me also that it is the duty of the State Medical Society to consider the preparation of a plan of periodic prepayment medical service to be administered or supervised by the Society for the benefit of the employed group and perhaps their families that will be more helpful or at least less harmful to us as physicians than state medicine or commercial enterprises organized for private profit.

Let us not pass these problems by as impossible of solution and be trampled upon by somebody actually doing them.

MISCELLANY

PERSONAL ITEMS

Dr. Robert O. Blood is a representative to the General Court from Concord.

Dr. H. L. Taylor, Portsmouth, in November gave a series of broadcasts on Cancer over Station WHEB.

Dr. and Mrs. Thomas J. Dougherty left Rochester, December 7, for Tampa, Florida.

Dr. Ethel Stuteville, Laconia, in November spent several weeks with friends in Florida.

Dr. and Mrs. Richard E. Wilder, Lancaster, left for Florida, December 12.

Dr. Robert B. Kerr of Manchester was appointed a member of the State Board of Public Welfare on January 3 by Governor Winant and his Council.

Dr. Fred E. Clow of Wolfeboro has been chosen a Fellow of the American College of Physicians.

Dr. Carleton R. Metcalf, Secretary of the New Hampshire Medical Society, spoke on "Sickness and Hospitalization Insurance" at the general session of the New Hampshire Nurses' Association held in Manchester, December 14.

SOCIETY ITEMS

A review of the clinic results, at a meeting of leading physicians representing all sections of New Hampshire at the Elliott Hospital, in Manchester, last November, indicated that more than 450 persons have attended diagnostic cancer clinics during the past year.

The clinic directors and other doctors met with the lay members of the New Hampshire Cancer Commission, appointed by Gov. John G. Winant, and discussed mutual problems and results. The Commission directs the expenditure of the appropriation of $10,000 for the diagnostic clinics and $25,000 for cancer treatment, made available by the last Legislature.

Dr. Charles Duncan, Executive Secretary of the State Board of Health, presided at the Manchester meeting.

A meeting sponsored by the New Hampshire Medical Society was held at the Eagle Hotel, Concord, N. H., December 13. Suggestions for discussion of Relief were submitted by the Medical Society's Committee on Public Relations, Public Policy and Legislation. The Committee is made up of Dr. Samuel T. Ladd, Portsmouth; Dr. Frederic P. Lord, Hanover; Dr. Charles Duncan, Concord; Dr. John F. Gile, Hanover; and Dr. Carleton R. Metcalf, Concord.

Following discussion of relief, physicians and their guests took up the problem of "Sickness and Hospitalization Insurance," with reports presented by Dr. Metcalf and James A. Hamilton of Hanover, Chairman of the State Hospital Superintendents' Club. Among the invited guests were Gov. John G. Winant, Gov.-Elect H. Styles Bridges, Mrs. Abby F. Wilder, Supervisor of Relief; Mrs. Mary L. Davis, State Board of Health; John S. B. Davie, State Commissioner of Labor; Milan Dickinson, State Comptroller; Edgar C. Hirst, State Tax Commission; Jay Corliss, Chairman of State Welfare Department, and Delegates from the County Commissioners, the State Senate, the House of Representatives and other groups.

HOSPITALS AND NURSES

A twelve-bed ward has been equipped in the Laconia Hospital through the bequest of James Joseph O'Brien.

The doctors of Littleton and surrounding towns, who use the local hospital, held a meeting on Thursday evening to organize a staff for the purpose of medical discussion and for closer coöperation in matters of medical policy in the hospital.

Dr. John M. Page was elected President of the staff, Dr. A. T. Downing, Vice-President and Dr. Barbara Beattie, Secretary.

It was voted to hold meetings on the first Thursday of each month at which time interesting cases and new methods of treatment will be discussed by different members.

There were fourteen babies examined at the Clinic in Elliott Community Hospital, January 11, under the auspices of the Keene District Nursing Association. Dr. Frank M. Dinsmoor was examining physician and Miss Anna Savage, Supervisor of Nurses, was in general charge.

Miss Alma Haupt, Associate Director of the National Organization of Public Health Nursing, addressed the Portsmouth District Nursing Association at its November meeting.

NEW MEMBERS

Dr. Ernest H. Joy, Warner.
Dr. Robert Boggs, Boston.

COUNTY MEETINGS

The annual meeting of the Belknap County Medical Society was held at the Laconia Tavern, Tuesday evening, November 13. Speakers were Dr. Frederic P. Lord, President of the New Hampshire Medical Society, and Dr. Carleton R. Metcalf, Secretary.

The Cheshire County Medical Society has elected the following officers: President, Walter H. Lacey, Keene; Vice-President, Walter F. Taylor, Keene; Secretary-Treasurer, John J. Brosnahan, Keene; Councilor, Arthur A. Pratte, Keene; Delegates, Osmon H. Hubbard, Keene; George S. Emerson, Fitzwilliam; Board of Censors, Arthur A. Pratte, Keene; H. S. Williams, Keene; Walter F. Taylor, Keene.

The annual meeting of the Merrimack County Medical Society was held at the Eagle Hotel, Concord, N. H., Wednesday, January 2, 1935. "Hospital Insurance" was discussed by James A. Hamilton, Chairman of the State Hospital Superintendents' Club. Addresses were made by Dr. Frederic P. Lord, Hanover, President of the New Hampshire Medical Society; Dr. Carleton R. Metcalf, Concord, Secretary. The following officers were elected at this meeting: President, Dr. James B. Woodman, Franklin; Vice-President, Dr. W. H. Tarbell, Contoocook; Secretary-Treasurer, Dr. Warren H. Butterfield, Concord.

The annual meeting of Sullivan County Medical Society was held at the Claremont General Hospital on Friday, December 14. An address was made by Dr. Carleton R. Metcalf, Secretary, New Hampshire Medical Society, on "Sickness Insurance." The following officers were elected for the ensuing year: President, Dr. Bernard P. Haubrich, Claremont; Vice-President; Dr. Donald C. Moriarty, Newport; Secretary-Treasurer, Dr. Henry C. Sanders, Jr., Claremont; Censors, Dr. Donald C. Moriarty, Newport; Dr. Ernest L. Huse, Meriden; Dr. John H. Munro, Sunapee; Delegates, Dr. Burton D. Thorpe, Newport; Dr. Charles E. Buchanan, Claremont; Member of Committee on Medical Jurisprudence, Dr. Henry C. Sanders, Jr., Claremont.

RECENT DEATHS

SANDERS — WALTER R. SANDERS, M.D., was born in Epsom, N. H., July 12, 1862.

He attended Pinkerton Academy in Derry, took courses at the Dartmouth Medical School and received the degree of M.D. from the Bennett Medical College of Chicago in 1884.

He practiced for a few years in Uxbridge, Mass., and Chester, N. H., removing to Derry in 1889.

He soon acquired a very extensive practice in Derry and surrounding towns, remaining active until within a few weeks of his death, which occurred on June 29, 1934. His widow and a daughter, Miriam D. Sanders, at present a teacher in the Rogers Hall School of Lowell, survive him.

A member of the New Hampshire Medical Society, he had hoped to be able to attend its annual meeting in May, 1934, when he would have received recognition as a practitioner of fifty years' standing.

Dr. Sanders was a member of the Central Congregational Church of Derry. He had served his town in the State Legislature and in two constitutional conventions. For many years he was a member of the local board of health.

Fraternally, he was a member of the Odd Fellows and of the Knights of Pythias.

An inimitable raconteur, he had an inexhaustible fund of anecdotes and stories at his command.

He was a good neighbor, a much-loved physician, and a loyal friend.

ROBERTSON—FREDERICK MCNAUGHTON ROBERTSON, M.D., of Bristol, N. H., died in that town, January 26, 1935. He was born in Boston, Mass., in 1876 and was educated in the schools of Framingham, Mass., and at Pratt Institute. He graduated from the Harvard Medical School in 1901 and following his graduation he studied a year at the Massachusetts Institute of Technology and practiced for a short time in Boston, moving to Bristol in 1904 where he lived for 31 years except for service during the World War when stationed at Chattanooga, Tenn., as captain in the Medical Corps. In 1902, Dr. Robertson married Miss Louise Cummings of Natick, Mass.

He was a member of the New Hampshire State Medical Society and served for three years as censor of the Merrimack County Center District Medical Society and was a Fellow of the American Medical Association.

Dr. Robertson was a member of the Harvard Club, the New Hampshire Surgical Association, the Associate Staff of the Margaret Pillsbury Hospital of Concord, and the Franklin Hospital.

He was a Mason; a member of the George Minot Cavis Post No. 26, American Legion; and the Bristol Rotary Club.

His religious affiliation was with the Grace Congregational Church of Framingham, Mass.

DAVIS—GEORGE MOSES DAVIS, M.D., of 827 Beech Street, Manchester, N. H., died in that city, January 14, 1935, after a sudden illness. He was born in Norwich, Vermont, in 1864 and graduated from the Dartmouth Medical School in 1889 and had practiced in Bedford and Merrimac for a short time before settling in Manchester. He had served on the staff of the Sacred Heart Hospital for twenty-five years and as medical referee for Hillsborough County for several terms. He had also served as physician for the Amoskeag Mills and the State Industrial

School, and was a member of the New Hampshire Medical Society and a Fellow of the American Medical Association.

Dr. Davis attended the Franklin Street Congregational Church.

He is survived by a daughter, Hilda L. Davis, of Manchester; a son, Harold L. Davis, of Pembroke; four grandchildren and two nieces.

GEORGE — HENRY P. GEORGE, M.D., died at his home in Claremont, January 1. Dr. George was born in Monroe, N. H., August 27, 1884. He attended the schools of Monroe and Littleton, the University of Vermont, and received his M.D. degree at Baltimore Medical College, Baltimore, Md., in 1912. In the same year he established an office in Claremont and continued in practice there until last April when poor health forced his retirement. He was a pioneer in the Roentgen ray and owned and used the first large x-ray machine in Claremont.

MIRABILE DICTU

(Excerpt from the letter of a grateful patient in the *Laconia Evening Citizen* of October 4, 1934.) An appreciation of the Laconia Hospital: beautiful for situation, friendly of atmosphere and efficient in administration. Dr. S. —— was the operating surgeon in charge of my case. It is needless for me to remind Laconia of its extreme good fortune in having one of his ability and skill, — coupled with genuine friendliness, connected with its hospital. He was the only doctor with whom I came in contact, but I have no doubt that all the others on the staff—each in his own particular field—are men 100 per cent qualified to heal the sick, and mend broken bodies.

No matter how praiseworthy the work of the doctor, his skill would count for nothing were it not clearly reflected by the nurses. From the student nurses up to those of long experience and authority, one and all impressed me as taking their responsibilities seriously, each devoted to her own special duties and efficient in their discharge. In the conscientious performance of their work, it seemed to me they clearly reflected thorough training and wise supervision.

A REPREHENSIBLE PRACTICE

The attention of this department has been drawn to a party who recently has been going about Merrimack County offering to rid pianos of moths—the latter actually present, or prospectively so, or imaginary. To this end a white powder is sprinkled by him throughout the inner mechanism. As reported, this powder is not only distributed over the felts and hammers but is banked to a considerable depth under the keys in the keyboard. Analysis of a specimen of this powder as submitted to us showed it to consist of arsenate of lead. The latter is a virulent poison—proper enough in its place, as for spraying trees or for killing potato bugs, but to be deemed quite out of place and a distinct health hazard when applied in a living room as a permanent deposit in the more or less open works of a piano. Householders are therefore cautioned against permitting any such practice. There are other and harmless means of moth extermination.—*Bulletin, New Hampshire State Board of Health.*

YALE CLINIC OF CHILD DEVELOPMENT

The first public showing of sound motion pictures of the life and growth of the human infant produced by the Yale Clinic of Child Development was given in New Haven on February 16. The films were assembled from scientific records collected by the Clinic over a period of years. They are intended for general educational and study purposes. The subjects include a description of the methods of studying infant behavior; early and later stages in the growth of infant behavior; posture and locomotion; from creeping to walking; a baby's day at twelve weeks; a thirty-six weeks' behavior day; a behavior day at forty-eight weeks; behavior patterns at one year; learning and growth; and early social behavior. The narrative spoken by Dr. Arnold Gesell, director of the clinic, is integrated throughout with the picture presentation. The films are unique as a means of bringing the results of scientific study over many years to persons who are actual practitioners in fields of child health and child training.

MEDICAL PROGRESS

PROGRESS IN UROLOGY, 1933

BY FLETCHER H. COLBY, M.D.*

RECOGNITION of the association of disturbances in function of the parathyroid glands with the formation of stone in the urinary tract constitutes a most important contribution to urology and throws some light on the very complex question of urinary lithiasis.

Hyperparathyroidism has been recognized as a disease entity only within the last few years. Study of the parathyroid glands and their relationship to the condition known as generalized osteitis fibrosa cystica has resulted in one of the most outstanding contributions of experimental medicine of our generation. The greatest impetus to the study of these glands came when Hanson, in 1924, and Collip, in 1925, discovered an active parathyroid extract called parathormone[1]. Many investigators then studied this subject and succeeded in producing the typical changes of the disease in experimental animals. Outstanding in the field of research were Bauer, Albright and Aub, Wilder, Johnson and Jaffe, and Bodansky. On the clinical side, Hunter in England, and Wilder, Churchill and Cope, and others have made important contributions.

It has been shown that the parathyroid glands affect calcium metabolism and that hyperactivity of the glands from tumor formation or hyperplasia results in grave metabolism disturbances. "The calcium ions in the body fluids are markedly increased and the phosphate ions are decreased. The serum calcium rises to figures of 13 or more mgms. instead of 10, and the phosphorus falls to 3 or less instead of 4 mgms. There is a large outpouring of both these elements in the urine. The large loss of calcium and phosphorus in the urine necessitates, provided there is no increased ingestion, a giving off of these elements from the bones. This in turn leads to a generalized demineralization of the bones including cortical and trabecular elements. Inasmuch as metabolic diseases are by nature generalized, this demineralization involves every part of every bone. Secondary changes in the bone, however, may be localized. There are four such: deformity, cyst formation, tumor formation and fracture. With the demineralization, there appears everywhere a fibrosis of the bone marrow (osteitis fibrosa).

"Usually the symptoms are related to the skeleton and consist of pain, bone tenderness, deformity, tumor, or most often spontaneous fracture. Polyuria and polydypsia are present in most cases and may lead to a diagnosis of diabetes insipidus. Indefinite symptoms such as decreased muscular tone, constipation and general depression are due to the hypercalcemia.

"In the classical type of the disease above described the diagnosis is usually first suspected by the x-ray appearance of the bones. The final diagnosis, however, depends on finding a high serum calcium and a low serum phosphorus."

It is important to recognize the fact that milder forms of this disease frequently occur without the marked bony changes here described. Little or no decalcification of the bones may be present by x-ray. Nevertheless, metabolic changes may be sufficiently marked to cause serious disturbances.

"With the increased calcium and phosphorus excretions in the urine one is not surprised that many of these patients develop the added complication of calcium phosphate stones in the urinary passages. The severer the degree of hyperparathyroidism the more apt this is to occur, and may be an early feature of the disease. Stones may develop without demonstrable bony changes. Furthermore, the demineralization of the bones may be prevented by the ingestion of large amounts of calcium and phosphorus in the diet; so that such individuals who drink large quantities of milk often have none of the marked bony changes but do have stone formation in the urinary tract. An important point in this consideration is the fact that renal colic may be the first symptom of the disease." (Quoted from Albright.[2])

Here, then, is an example of brilliant experimental research and clinical study which has led to an etiology of urinary lithiasis. The tangle is only partly unravelled, however, for dysfunction of the parathyroids accounts for but a small proportion of stones in the urinary tract. From recent material at the Massachusetts General Hospital it seems that about ten per cent of the patients presenting themselves with urinary calculi have hyperparathyroidism. It has been a routine for some time at this institution to determine the serum calcium and phosphorus of every patient with stone in the urinary tract. In several instances this procedure has led to the diagnosis and removal of a tumor of the parathyroids.

An exceedingly good summary of parathyroidism with the surgical treatment of the disease is given by Churchill and Cope[3], from whom we take the liberty of quoting freely.

*Colby, Fletcher H.—Associate Urologist, Massachusetts General Hospital. For record and address of author see "This Week's Issue," page 358.

Churchill has removed parathyroid tumors from twenty-five individuals suffering from this condition, probably the largest series of such cases in this country. "It is the unusual case of hyperparathyroidism that presents a palpable tumor on physical examination. In fact only 2 of 11 cases gave external evidence of a tumor in the neck. This is due to the fact that the tumor lies deep in the neck or mediastinum and to the pliant nature of the parathyroid tissue that molds itself, to conform to adjacent structures. Grossly adenomatous parathyroid tissue resembles that of the normal gland in color, unless the tumor is palpable the search for it may be one that taxes the patience and resources of the surgeon. It is theoretically possible to encounter parathyroid tissue anywhere from the pharynx to the mediastinum. To assume that the parathyroids always lie in close proximity to the thyroid gland has proved a pitfall to the unwary surgeon. It is also erroneous to consider them symmetrically placed and four in number. In each of two postmortem dissections five parathyroid bodies have been disclosed. The widely spaced locations of even a small number of tumors attest the truth of the statements made, and the fact that 3 of 11 cases had had at least one previous operation in an unsuccessful attempt to find the tumor emphasizes their practical surgical application.

"The golden opportunity to find a small parathyroid adenoma lies in the first surgical exploration of the neck. The immediate result in the cases from which a tumor has been removed either completely or by subtotal resection, has been a correction in the disturbance in calcium and phosphorus metabolism. In fact, postoperative studies showing the return to normal constitute the final step in establishing the diagnosis and efficacy of the treatment. Following removal of the tumor in true hyperparathyroidism the serum calcium value falls with dramatic rapidity. Symptoms and signs of tetany may appear even with a serum calcium above the normal level, when hypercalcaemia has been present for a long time. Improvement in many of the symptoms of hyperparathyroidism may be expected within a few days." (Quoted from Churchill and Cope.)

Of the cases of urinary tract stone associated with parathyroid disease, there has been no recurrence of the stone after removal of the parathyroid tumor. When one considers the fact that the great clinics of the country report from twenty to forty per cent recurrence in nephrolithiasis, the importance of this fact becomes evident. Although hyperparathyroidism is the cause of but about ten per cent of urinary calculi it is the etiological factor in this number, and unless corrected a recurrence of the stone is probably inevitable.

Another advance reached through the study of the glands of internal secretion is a recognition of the association of the anterior lobe of the pituitary with malignant tumors of the testicle. The appearance of the hormone of the anterior hypophysis (Prolan A) in the urine of a man suffering from teratoma testis was first observed by Zondek in 1929[4]. Ferguson working at the Memorial Hospital in New York has concentrated on this problem and we quote his writings on the subject based on the study of 117 consecutive cases of teratoma testis in which the behavior of the hormone of the anterior hypophysis (Prolan A) was determined.

"Prolan A is as yet unreported in the urine of a normal healthy man. The hormone disappears from the urine within 7 to 10 days after birth and does not again reappear except under pathological circumstances. Zondek examined the urine of 40 healthy males without result. Kegel working at Johns Hopkins in collaboration with the writer (Ferguson) examined 85 normal males without observing a positive reaction. Branch at the Boston City Hospital examined the urine of 500 men with negative results except in 2 cases of teratoma testis.

"Over 100 patients with benign lesions of the testis of all varieties have been observed and in no case was the excretion of Prolan A in excess of 100 units per liter of urine noted.

"No positive reactions were found in benign lesions of the testis, nor in normal men. One does not need to fear a false positive reaction. When the urine has been assayed for 100 units per liter of urine and no reaction observed in a suspected case of teratoma, the possibilities are against the diagnosis. This is not to say that the rare adult carcinoma of the testis may not exist, or that tumors involving the neighboring structures not of teratoid origin are absent. Finally, an excretion of 500 mouse units of Prolan A per liter of urine in the male has never been observed in the absence of either teratoma testis or extra-genital teratoma or chorion-epithelioma[5]."

An important observation is that the amount of hormone excreted varies with the different types of testicular tumors, the most malignant showing the highest number of units per liter. So that these tumors are classified in the following order: (1) chorioepithelioma; (2) embryonal adenocarcinoma; (3) embryonal carcinoma with lymphoid stroma; (4) seminoma; (5) teratoma with adult features. The hormone excretion in these groups decreased in the order listed.

It was also observed that the excretion of the hormone varies with the extent of the disease. Where extensive metastases are present there is an increase in hormone excretion.

The effect of treatment on the excretion of Prolan A is interesting. Most of the cases in this series of 117 were treated by x-ray or radium. In five cases the excretion of Prolan A was unaffected by irradiation. In such in-

stances the prognosis is said to be bad. In the majority, however, irradiation of the primary tumor or its metastases caused a drop in the excretion of Prolan A in the urine; the rapidity and extent of which is said to be a good index of the radiosensitivity of the tumor, and a reliable factor on which to base the prognosis. After surgical removal of a tumor in a case without metastases and with a measurable amount of Prolan A in the urine, the hormone is said to be absent as soon as seven days after operation.

Observations were made on the excretion of Prolan A in instances of recurrence and metastases of these tumors. Metastases are apt to be difficult to detect in an early stage because they involve the lymph nodes along the aorta and vena cava and are deep seated. In all of the recurrent cases in Ferguson's series an increase in the excretion of Prolan A in the urine was demonstrated. The fact that this could be detected anywhere from two weeks to three months before such lesions could be demonstrated clinically is significant. Thus, the test should provide extremely valuable information in prognosis and an indication for further treatment.

It is said that an output of 400 mouse units or less of Prolan A per liter of urine is consistent with clinical cure and that 500 units per liter is not consistent with clinical cure. The conclusion is that a patient in whom there is no clinical evidence of disease with a hormone output of 400 units or less per liter may be regarded as clinically well.

The technique of this test is said to be still in a relatively crude state. By this we assume that the actual quantitative determinations of Prolan A is not yet a refined procedure. It may be said that certain other clinics have been unable to satisfactorily quantitate the hormone to the degree here shown. Ferguson feels that recent advances in the biochemistry of Prolan A will result in more exact methods of quantitative estimation.

Regardless of degrees of refinement, this test probably has considerable value and may eventually be relied upon as much as the Aschheim-Zondek test for pregnancy. As an aid to the difficult differential diagnosis of tumors of the testes its importance is readily recognized. As an indication of the structural type of malignant tumors of the testicle, in addition, its worth will be increased. This is true since the rapidly growing embryonal carcinoma is radiosensitive and may respond well to x-ray and radium while the less malignant adult teratoma is radioresistant and better suited to radical operation. If it can be relied upon as an indication of recurrence and metastases, its value will be even greater.

A symposium on the curability of cancer provides figures on growths involving the genitourinary tract:

Malignant Tumors of the Kidney and Pelvis of the Kidney[7]. Following surgical removal of malignant tumors of the kidney at the Mayo Clinic from 1901 to January 1927, 110 patients have lived for five or more years. Inasmuch as malignant renal tumors were removed from 256 patients during this period, there were five year cures in approximately forty-three per cent. In forty-one additional cases the tumor was so extensive that it could not be removed and deep radiation was given. Seven or seventeen per cent of these forty-one patients lived for more than five years. Of the 110 cases who lived for five years, seventy-six are living and well and thirty-four have died. In the thirty-four deaths there were sixteen who died of metastases.

Carcinoma of the Prostate[8]. The operation of total perineal prostatectomy was performed in forty instances. This means removal of the entire gland with its capsule, the neck of the bladder, seminal vesicles and prostatic urethra. The total operative mortality was about six per cent. Twenty-nine of these patients have lived for five years or longer. It was possible to follow twenty-five. Of these, twelve or forty-eight per cent have passed the five year period as cured.

On account of the marked encapsulation of the prostate by its own capsule and the two layers of pelvic fascia which surround it, the cancer is confined within three fascial coverings and rarely penetrates them until late. As the disease progresses it generally travels behind the bladder and in front of the two layers of fascia. Cancer of the prostate, therefore, probably presents the best prognosis for a radical cure of any of the deep-seated organs. This remarkable encapsulation, confining the disease to the limits of the prostate itself, forms the finest safeguard against invasion of adjacent tissue and gives the surgeon a splendid opportunity for radical cure (quoted from Young).

Malignant Tumors of the Bladder[9]. At the Mayo Clinic from 1910 to 1927, 600 malignant tumors of the bladder were treated by various surgical procedures, resection, excision, diathermy, etc. In this group of 600 patients there were 165 (about 28 per cent) who were cured for five years or more. Sixty-seven (40.6 per cent) of these 165 patients had recurrences although forty-two of this sixty-seven are now living and free from bladder symptoms. The lesions in 110 (66 per cent) of the 165 cases were on the lateral walls and dome, whereas fifty-five (33 per cent) involved the base trigone, urethra and ureteral orifices. The relatively high percentage of five year cures of patients with tumors graded three and four is striking and serves to emphasize the importance of treating malignant lesions of the bladder which appear to be inoperable.

Tumors of the Testis[10]. Three procedures in the treatment of testicular tumors are given: (1) simple castration, (2) radiation with or without castration, and (3) radical operation in

which the testicle and its primary lymph zone are removed. The fact that the embryonal carcinoma type of tumors are radiosensitive and the teratomata are not, gives at once a basis for treatment. The former with or without metastases should be treated by radiation either with or without castration. The latter (teratomata) are hopeless when there is clinical evidence of metastases. Where there is no evidence of metastases, the teratomata are the only types of tumor in which radical operation is indicated.

In eighty cases where the radical operation has been successfully performed, sixty-three per cent are living and thirty-five per cent are dead of metastases. Seventeen or twenty per cent of these cases have been alive for five years or longer. The operative mortality has been one per cent. Of 250 cases treated by simple orchidectomy seventeen or six per cent have been living for five years or longer. Three of twenty-four otherwise hopeless cases, teratomata with lymphatic metastases, have been cured by radical operation. The fact that eighteen of thirty-six cases in which the pathologist could find no evidence of metastases in the glandular tissue removed have been living for four years or longer is taken to indicate that radical surgery is preferable to simple castration.

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COMPARISON OF DISEASE INCIDENCE IN CONNECTICUT WITH 1934 AND SEVEN YEAR AVERAGE

MONTH ENDING FEBRUARY 2, 1935

Diseases	1935 Week ending Jan. 12	1935 Week ending Jan. 19	1935 Week ending Jan. 26	1935 Week ending Feb. 2	Average cases reported for week corresponding to Feb. 2 for past seven years	1934 Week ending Jan. 13	1934 Week ending Jan. 20	1934 Week ending Jan. 27	1934 Week ending Feb. 3
Cerebrospinal Men.	—	1	—	—	1	—	—	1	1
Chicken Pox	317	162	147	166	115	260	114	152	82
Conjunctivitis Inf.	—	—	1	—	—	3	—	34	1
Diphtheria	4	11	3	7	18	7	5	6	3
Dysentery Amebic	—	—	—	—	—	1	—	—	—
Dysentery Bacillary	1	3	1	1	—	—	—	—	—
Encephalitis Epid.	—	—	—	1	—	—	2	—	—
German Measles	5	6	7	11	11	2	—	4	2
Influenza	239	96	42	80	157	12	12	40	4
Measles	429	529	419	558	165	10	17	14	34
Mumps	52	47	29	77	75	203	132	132	97
Paratyphoid Fever	—	—	—	1	—	—	—	—	—
Pneumonia (Broncho)	70	56	24	51	56	52	38	39	29
Pneumonia (Lobar)	98	73	38	37	61	48	57	45	38
Poliomyelitis	—	—	—	—	—	—	—	1	—
Scarlet Fever	61	65	46	46	82	62	71	53	68
Septic Sore Throat	—	9	5	7	2	5	2	2	2
Smallpox	—	—	—	—	2	—	—	—	—
Trichinosis	1	1	1	—	—	—	1	—	1
Tuberculosis (pul.)	32	21	22	24	25	18	24	23	32
Tuberculosis (O.F.)	2	2	—	1	3	—	4	3	3
Typhoid Fever	3	—	2	—	—	—	—	1	—
Undulant Fever	1	1	2	—	—	1	1	—	1
Whooping Cough	82	94	59	88	74	47	64	45	36
Gonorrhea	25	34	35	57	39	24	31	35	22
Syphilis	45	46	55	61	52	32	29	55	38

Remarks: No cases of Asiatic cholera, glanders, plague or yellow fever during the past seven years.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE MORTEM AND POST MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.

CASE 21081

PRESENTATION OF CASE

A forty-three year old American widow entered complaining of diarrhea of nine years' duration.

Nine years before entry, approximately three months following what was called a nervous breakdown, she began to have frequent loose bowel movements, associated with slight cramp-like lower abdominal pain. The diarrhea was especially marked between 3:00 and 5:00 a.m., occurring about every half hour. Throughout the remainder of the day she was usually symptom-free, although about every third or fourth day she had one or two movements during the day. She also had lower abdominal pain almost every day beginning at about 4 p.m. and lasting until 8 p.m. Soda occasionally gave relief. The stools were always watery and of a golden yellow to dark brown color. Mucus was present in the stools about three or four times a week and bright red blood about once a month; the latter lasted only a day or two. These symptoms, which began nine years before entry, continued until admission. One year before entry she had two or three tarry stools. Six months later after five or six bowel movements she felt faint and nearly fell. She vomited this time and after lying down for a while felt well again. Her appetite was poor. During the first three years of this illness she gained about twenty-five pounds in weight, but during the last six years had lost 67 pounds. She gradually became weaker as the disease progressed, and during the past few months had to rest several times a day while doing her work. There was no history of fever, chills, or remissions.

Her mother died at the age of sixty-five of pneumonia. Her father, one sister and five brothers were living and well.

She was married twenty-one years before entry but had separated from her husband three years later. Her husband had died of tuberculosis six years before her admission. Two children were living and well. There were two induced miscarriages occurring at one and three months.

She was born in Massachusetts and had lived there her entire life. Nine years before entry she had a nervous breakdown which she felt was due to the responsibility she had as a bookkeeper and in taking care of her two sons.

Physical examination showed a well-developed, poorly nourished woman lying comfortably in bed. The skin and mucous membranes were pale. There was complete edentia. The tongue was smooth, pale and slightly enlarged. The thyroid was slightly enlarged. The eyes showed a slight stare and a very slight lid-lag. The chest was negative. The heart was not enlarged. The sounds were of good quality; no murmurs were heard. The blood pressure was 114/72. The abdomen was soft and no masses were felt. (Note, however, x-ray report below.) The sigmoid, however, was palpable and was believed to be filled with liquid.

The temperature was 98.8°, the pulse 88. The respirations were 18.

Examination of the urine was negative. The blood showed a red cell count of 3,070,000, with a hemoglobin of 40 per cent. The white cell count was 10,500, 64 per cent polymorphonuclears. A smear showed achromia of the red blood cells with some irregularity in size and shape. The platelets were normal. The stools were soft and watery. In seven examinations the guaiac was positive in two and mucus was found in one. No amebae were seen. A Hinton test was negative. Agglutinations for typhoid, paratyphoid and dysentery were negative. The serum protein was 6.2 per cent. The basal metabolic rate ranged from +5 to +14.

A barium enema showed practically complete loss of the mucous membrane of the entire colon. The rectum was small. There was a narrowing at the junction of the sigmoid and descending colon and one at the splenic flexure and at the hepatic flexure. Situated at the mid-portion of the descending colon were numerous saw-tooth projections. The entire ascending colon was tubular. The barium seemed to be obscured at the hepatic flexure before flowing into the ascending colon. The terminal ileum showed a constant defect one-half inch from the ileocecal valve. The spleen produced a slight pressure defect on the colon. A re-examination on the twelfth day showed a three inch constricting lesion of the ascending colon and an abnormal terminal ileum. The fluoroscopist was able on both occasions to feel a tubular mass corresponding to the area of constriction. A proctoscopy showed that the mucous membrane was granular, slightly boggy and bled easily. No polyps were seen. On the fifteenth day operation was performed.

She was doing fairly well postoperatively and was being prepared for a proctoscopy when, on the eighteenth day, while sitting up in a chair, she developed severe pain in the chest, dyspnea, cyanosis, distended neck veins and a rapid thready pulse. She died fifteen minutes later.

Differential Diagnosis

Dr. Richard H. Miller: There are several things that must be briefly discussed. This case strikes one as falling into the class of a severe chronic organic lesion of the colon; namely, tuberculosis, amebic dysentery or chronic ulcerative colitis. I think that we can rule out mucous colitis as being a non-organic lesion and one which does not require further consideration here. The deficiency diseases such as pellagra, and another one that is partly deficiency, namely sprue, do not seem to me to fit into the picture here presented. If she had pellagra there would be skin and central nervous system lesions, and if she had sprue there would be other things going with it. It seems to me that we come at once to the consideration of the three diseases which I have already mentioned: first, amebic dysentery; secondly, tuberculosis; and thirdly, chronic ulcerative colitis.

She had never been out of Massachusetts, which, to an extent, is against the diagnosis of amebic dysentery, although that is possible. I saw a man who had never been out of New England — he lived at North Conway, N. H. —who had amebic dysentery, proved definitely, though the source was never determined. The examination in this case shows that no amebae were found in the stool, and there is nothing in particular about the history which leads one to make that diagnosis. I think that, with the examinations which we carry out in this hospital, amebae would have been found had they been present.

As to tuberculosis, that is something which must be considered. She had married a man who later died of tuberculosis, although she had not lived with him for twelve years. The occurrence of tuberculosis in the colon is usually most marked on the right side; not, in my experience, involving to such an extent the whole of the colon.

Chronic ulcerative colitis, which is an extraordinarily serious disease, I believe can account for all the conditions here defined.

I should like to go back to the beginning and refer to certain points of interest. She said that the diarrhea was especially marked between three and five a.m. I do not know how to interpret this, but I do not think it is a matter of specific importance. It also says that she had lower abdominal pain almost every day from four o'clock until the middle of the evening. That again is not specific.

Bright red blood was passed about once a month. That could very well go with the condition of ulcerative colitis.

It says that one year before entry she had two or three tarry stools. That is hard to interpret from my point of view because it would mean blood coming from high up in the intestinal tract. I cannot explain it unless there may be some other ulcerative condition high up in the duodenum.

She went on for three years feeling fairly well and gaining twenty-five pounds, but following that she gradually went downhill, losing weight, from 165 to 98 pounds. One might ask oneself if there were any possibility of cancer; but I should say not, because she certainly would not live so long.

Passing down to the physical examination, we know that the one outstanding fact is that she has slight exophthalmos and slight lid-lag, which suggest a very mild degree of exophthalmic goiter, but I believe that has nothing to do with the condition which we are discussing at this time.

She was moderately anemic—the red count was three million, the hemoglobin forty per cent —which would easily fit in with ulcerative colitis and furthermore, as you note, in seven examinations blood was found at two. That, again, is consistent.

The basal metabolic rate varied from five to fourteen, which is not very much if any above the normal range.

Complete loss of mucous membrane of the entire colon proves a very extensive organic disease and that is confirmed by the narrowing at the junction of the sigmoid and descending colon and the various other findings which are detected in the x-ray. The constant defect noted about half an inch from the ileocecal valve may be part of the same process.

Proctoscopy shows that the mucous membrane was granular, slightly boggy, and bled easily. In chronic ulcerative colitis that is the picture which one ordinarily sees. There may be tiny ulcerations which will bleed easily when touched but such is not essential.

I will make a diagnosis of chronic ulcerative colitis and say that they have done an ileostomy for the temporary palliation of that condition. Following this she obviously did well until, on the eighteenth day, she died very suddenly. The story of the death as given here would suggest to me a large thrombus, probably coming from the femoral vein, probably on the left, and the thrombus would be found curled up in the pulmonary artery.

My diagnosis is chronic ulcerative colitis; operation, ileostomy; and death from pulmonary embolism.

Dr. Tracy B. Mallory: I think that Dr. Holmes can add something to the x-ray report.

Dr. George W. Holmes: In these cases with examinations of the gastro-intestinal tract that are brought up at these conferences we have great difficulty in interpreting the findings from the films alone. It is necessary that one examine the patients and see them under the

fluoroscope to interpret the findings correctly. I can add very little to what is given in the note. Certainly from this plate, which is taken after evacuation, there is an absence of the normal haustral formation and absence of the normal mucosa, which is consistent with what Dr. Miller has said, an ulcerative colitis. On the other hand in the note it is stated that a definite mass was felt. Such a finding would be most unusual in ulcerative colitis. Ordinarily when you feel a mass it means either tuberculosis or malignancy. The multiplicity of the lesions is somewhat against malignancy.

DR. MILLER: In the physical examination it is stated, "no masses were felt".

DR. MALLORY: I think you are put at a disadvantage, a mass was felt by the x-ray examiner but not by the man who did the original physical examination. Dr. McKittrick was able also to feel the mass but that apparently did not get into the record.

DR. HOLMES: Basing my conclusions on the report, I would put tuberculosis first and ulcerative colitis second.

DR. MILLER: I should not expect to feel a mass in a chronic ulcerative colitis and yet from the general history of the case I would adhere to that diagnosis.

DR. MALLORY: An exploratory operation was done, which Dr. McKittrick will tell us about.

DR. LELAND S. MCKITTRICK: If Doctor Miller had had the privilege of examining the patient as I did, he would have felt a mass in the right lower quadrant, and undoubtedly modified his diagnosis a little. I also had the privilege of proctoscoping the patient which confirmed the x-ray diagnosis of chronic ulcerative colitis. The presence of the mass in the region of the cecum or ascending colon plus the x-ray findings seemed to us to justify a preoperative diagnosis of carcinoma of the ascending colon and chronic ulcerative colitis. At operation there was a characteristic annular carcinoma of the ascending colon just above the ileocecal valve. It was very extensive and a number of firm local glands, probably metastatic, were noted. The remainder of the bowel was not palpated carefully but in the gross it was characteristic of ulcerative colitis, i.e., the bowel was narrowed, distinctly thickened, very pale, with a number of small inflammatory glands in the transverse mesocolon. The process seemed to involve the entire colon up to and including the cecum. It did not seem so extensive, however, as many of the cases of ulcerative colitis upon which we have operated and possibly not sufficiently marked to have made ileostomy necessary for its treatment. The problem which was presented to us, however, was that of deciding upon the type of operation suitable for a patient with both chronic ulcerative colitis and a carcinoma of the right colon. In other words, was the condition of the bowel sufficiently severe to make it impossible to do a safe suture between the terminal ileum and the transverse colon following a resection of the right colon? Also, because of her long-standing chronic disease the risk of an anastomosis at this time seemed greater than in most patients with cancer of the ascending colon. The operation which seemed most suitable was removal of the right colon to about the junction of the right and middle thirds of the transverse colon according to the Mikulicz procedure. In this way we were burning no bridges, the patient had an ileostomy which could be used as such for as long a time as seemed indicated, and if more careful pathological study of the bowel seemed to indicate that an anastomosis was feasible, the spur could be cut in the usual manner and the Mikulicz procedure completed. This then was the operation which was carried out.

CLINICAL DIAGNOSES

Carcinoma of the ascending colon.
? Ulcerative colitis.
Pulmonary embolus.

DR. RICHARD H. MILLER'S DIAGNOSIS

Chronic ulcerative colitis.

ANATOMIC DIAGNOSES

Multiple adenocarcinomata of the cecum and the transverse colon.
Benign polyp of the colon.
Chronic ulcerative colitis.
Pulmonary embolism.
Duodenal ulcers, healed.
Chronic vascular nephritis.
Operative wound: Resection of cecum and enterostomy.

PATHOLOGIC DISCUSSION

DR. MALLORY: The specimen which we received in the laboratory showed a frank carcinoma of the cecum involving the ileocecal valve and cancer extending to the very margin of the specimen received.

The patient went along as described in the record and did die of pulmonary embolism, as Dr. Miller suggested. At autopsy we found still more extensive pathology in the colon. Immediately beyond the point of resection were numerous small plaque-like thickenings of the mucosa which felt quite hard but were not ulcerated. We were not able to guess what they were in gross. Microscopically each of them seems to be a separate carcinoma. The entire colon from end to end showed the denudation of the mucosa which is characteristic of ulcerative colitis, though no deep penetrating ulcers were present. When we came to the splenic flexure we found another tumor, a polypoid mass without induration which microscopically ap-

pears to be a benign polyp. So that we can sum up the case as one of slowly progressive chronic ulcerative colitis in which there developed several separate neoplasms one of which was benign and two or more of which were malignant.

A PHYSICIAN: Can you say when in the course of events in this history the carcinoma put in an appearance?

DR. MALLORY: I do not see any way that we can guess that. I think there can be no question that the colitis preceded the tumors by some time. So far as I can remember this is the first case of ulcerative colitis we have had in this hospital in which carcinoma has developed.

A PHYSICIAN: Is there any way of telling whether the colitis or the polyp was first?

DR. MALLORY: I suspect strongly the colitis. It was of a very chronic type. A marked polypoid hyperplasia of the persisting remnants of the mucous membrane is a frequent thing in ulcerative colitis. Ordinarily it seems nothing more than a hypertrophy of the persisting mucosa, but once in a while the hypertrophy or hyperplasia gets so marked that one begins to wonder if he is not dealing with a neoplastic change.

DR. HOLMES: Was there any change in the terminal ileum?

DR. MALLORY: Not directly. The cancer involved the ileocecal valve itself and there were one or two large nodes in the immediate neighborhood. That accounts for the deformity in the terminal ileum. The tumor did not extend into the ileum.

DR. HOLMES: If the terminal ileum is involved it is more likely to be tuberculosis, is it not?

DR. MALLORY: Yes, I should say that is correct.

A PHYSICIAN: Would you say that polyps that develop in ulcerative colitis are more apt to be malignant than the polyps you get otherwise?

DR. MALLORY: I cannot answer you. We know very little of the time factors involved and how long the polyposis has been going on.

DR. MILLER: I have been very much interested in this matter of multiple polyposis of the colon. Some cases were reported last year of distinct familial occurrence in which a large number of people in three families had multiple polyposis and cancer of the rectum or of some other part of the colon. We have a family now that we have treated in this hospital where the father died of cancer of the rectum and two out of three children had multiple polyposis and multiple cancers involving both rectum and other parts of the colon. I agree entirely with Dr. Mallory, that in cases of chronic ulcerative colitis the mucous membrane which is left tends to overgrow and present a picture resembling grossly multiple polyposis but which is really simply an inflammatory reaction, and I do not think that these polyps would have any particular tendency to develop into malignancy. My experience with chronic ulcerative colitis is not great, but this is the first case I have ever known of in which cancer has developed anywhere in the colon.

CASE 21082

PRESENTATION OF CASE

A fifty year old Canadian iron worker entered complaining of diarrhea, vomiting and weakness of two months' duration.

Four years before entry the patient was sick for ten days with influenza. He returned to work but felt that he had never fully recovered from this illness and had remained quite weak. The following year he had four or five attacks of rather profuse diarrhea lasting two or three days and occasionally accompanied by vomiting but not by abdominal pain other than the mild colic associated with the diarrhea. He noticed no blood in his stools, and had no tenesmus or hematemesis. His appetite was fair between these attacks and his stools were normal and soft. He had never been nauseated. During the following two years these attacks became more frequent, lasted from three or four days to a week, and were associated with a sense of midepigastric soreness. He felt quite miserable. During the past year the attacks had become even more frequent and each one lasted a little longer than the previous one, the attacks before the last being of three weeks' duration, the last one six weeks. Because of these attacks he limited his diet to warm broth, milk and water. During the past year he had lost about thirty pounds in weight. Four months before entry he developed very sharp burning pain with exquisite tenderness over the course of the tendons and nerves on the dorsum of the hands, the extensor surfaces of the forearms, and possibly in the finger joints. No wrist drop was noticed. Both feet were involved to a less extent. He also noted that he had numbness and tingling of his hands and feet and that his shoulders were painful. These symptoms continued but were less prominent than at the onset. After his last attack of diarrhea, which began approximately six weeks before entry and which continued until admission, he developed marked weakness, dyspnea and palpitation on exertion and numerous dizzy spells. During this period he vomited very often, occasionally chocolate-like material. He had numerous chills and fever during this attack and frequent drenching night sweats. He had been forced to stop work during the past year.

The family history is non-contributory.

He had been married thirty years. His wife and eight children were living and well. One child died of diphtheria. His wife had had six miscarriages, each occurring at two to three months.

His past history is non-contributory except for scarlet fever twenty years before entry.

Physical examination showed a pale emaciated middle-aged man in no acute distress. At times he appeared slightly euphoric. The skin was dry and pale with a slight yellow tint. His teeth were dirty and there was moderate pyorrhea. The chest had a few râles at both bases. The heart was not enlarged; the sounds were somewhat faint. The blood pressure was 100/50. The abdomen was scaphoid and showed some spasm in the right and midepigastrium. In the epigastrium there was an ill-defined area of resistance 7 centimeters in diameter which was dull to percussion. This apparent mass did not descend with respiration although the examination was not very satisfactory. It appeared to be continuous with the liver. The liver dullness was 1.5 centimeters below the costal margin in the nipple line. Rectal examination was negative. The finger joints were tender; the hands were weak.

The temperature was 99°, the pulse 100. The respirations were 27.

Examination of the urine showed a specific gravity of 1.012 to 1.020, a slight trace of albumin, 3 to 6 white blood cells per high power field, and 4 to 6 hyalin and granular casts. Bence-Jones protein was not present. Examination of the blood showed a red cell count of 2,600,000, with a hemoglobin of 45 per cent. The white cell count was 12,700, 65 per cent polymorphonuclears. One, out of four stool examinations, showed a strongly positive guaiac test. A Hinton test was negative. The non-protein nitrogen of the blood was 32 milligrams. A gastric analysis showed free hydrochloric acid.

X-ray examination of the colon showed a constant narrowing along the upper surface of the distal transverse colon near the splenic flexure. The lesion produced no distinguishable evidence of involvement of the mucosa and was interpreted as being extrinsic. There was no displacement of the middle third of the stomach. The esophagus, stomach and duodenum were negative. The pelvis showed slight mottling in the region of the trochanters of both femora and both pubic bones due to minute areas of diminished density within the bones. The fourth lumbar vertebra showed some deformity interpreted as being due to old trauma. A lateral view of the skull presented an appearance similar to that seen at the lower pelvis but slightly more marked.

The diarrhea continued. No amebae were found in his stools. A proctoscopy showed an edematous pale mucosa with dilated vessels and considerable mucus but no evidence of ulceration. He was transfused on the eleventh day and appeared somewhat brighter afterward. Another transfusion was performed during the fourth week. A gastroscopy was done and the findings suggested neoplasm. At about that time during his course in the hospital a serum protein was found to be 13.5 per cent. He began to go downhill. Another serum protein during the fifth week was 11.7 per cent. This finding led to a more intensive search for Bence-Jones protein in the urine, and it was found on two examinations. The serum calcium was 13.9 milligrams, the phosphorus 4.7, and the phosphatase 3.4 units. In addition a plasma cell blast was found in the blood smear. During the fifth week he became comatose and the temperature rose to 103°. He died on the thirty-sixth day.

Differential Diagnosis

Dr. Wyman Richardson: "During the following two years these attacks became more frequent and were associated with a sense of midepigastric soreness." That might lead us to suppose that the lesion is not in the large bowel but higher up in the gastrointestinal tract.

"Because of these attacks he limited his diet to warm broth, milk and water." Not a very sufficient diet; but it does not say for how long a period he had been on that limited diet. It is a fair guess that these symptoms may be due to polyneuritis, in turn due to lack of vitamin B in the diet. It does not sound like bone pain to me.

The weakness, dyspnea and palpitation are new and might be due again to vitamin lack or to anemia, perhaps secondary to hemorrhage.

He has chocolate-like material in the vomitus and I think it is fair to say the chances are that he has gastrointestinal bleeding, again probably from the upper gastrointestinal tract.

In spite of my teaching that a long history of miscarriages is suggestive of syphilis, in practice I have had very little help from this historical fact.

"The skin was dry and pale, with a slight yellow tint." We can question that since there is no mention of the sclerae.

His tongue is not mentioned. I assume that it was red and fiery; but that is just my imagination.

I think the notation "some spasm" on the medical ward is probably rather different from the notation "definite spasm". I doubt if that really means that he had definite spasm.

"In the epigastrium there was an ill-defined area of resistance 7 centimeters in diameter which was dull to percussion." You can take that as a mass or not. I believe it was, because it was definitely associated with dullness.

There is no mention of reflexes or nerve tenderness. Perhaps we should assume that

they are normal, although I wonder if there might not have been some evidence of peripheral nerve involvement.

Up to this point there is not very much to establish a definite diagnosis. I have been willing to say that he had a lesion in the upper intestinal tract, probably with ulceration, that he might very probably have had a vitamin B deficiency, and that he had an anemia, that was not particularly characteristic of pernicious anemia, but that might conceivably be due to lack of the extrinsic factor. The anemia might also be due to bone marrow invasion. If this anemia were secondary to long hemorrhage it should be definitely hypochromic. It apparently is not. If it is pernicious anemia there should be a lower white count and the description of the smear is significantly left out. With this in view evidently they went ahead to try to find some evidence of marrow invasion by x-ray.

X-ray Interpretation

Dr. George W. Holmes: This patient also had a very complete gastrointestinal study but, it is recorded in the notes, that the x-ray examination was negative. There is nothing in this large collection of films that would allow me to make a different diagnosis. The bones in this case are perhaps the most interesting. We have films of the pelvis, skull and spine, and at this point here above the acetabulum there is a localized area of diminished density of bone with some destruction of the trabeculae. The bones are somewhat decalcified. The trabeculation appears to be irregular. When we come to the skull we have a similar appearance. The trabeculae are coarse. The skull is less dense than normal. There is occasional spotting that looks like small areas of calcification and bone destruction. You can see the same process to a less marked degree in the lumbar spine and in the rib. None of these things are marked or typical. Any of the conditions that usually produce decalcification can produce a similar picture. If I am right in my interpretation of this area here, it is the most valuable finding in the x-ray examination. It can hardly be due to any of the decalcifying process. It looks more like actual destruction of bone from tumor.

Differential Diagnosis Continued

Dr. Richardson: Though Dr. Holmes is unable to demonstrate from the films any lesion in the intestinal tract, it is recorded that "The examination of the gastrointestinal tract by barium showed a constant narrowing along the upper surface of the distal transverse colon near the splenic flexure. The lesion produced no distinguishable evidence of involvement of the mucosa and was interpreted as being extrinsic." That would seem to support the rather vague evidence discovered in the physical examination of an abdominal mass. I think one must also take Dr. Benedict's finding, that the gastroscopy suggested neoplasm, seriously. However, the only positive result of x-ray examination was that some evidence of bone marrow involvement by a tumor was discovered.

We have a man with a very high serum protein, in whose urine Bence-Jones protein was eventually discovered, and with x-rays suggesting some bone involvement. The evidence is therefore very strongly in favor of myeloma. I think that metastatic malignancy from other causes can give Bence-Jones protein in the urine, but I do not think it can give such a high serum protein; at least I have never heard of it. The x-ray evidence, the anemia, the high serum protein, the Bence-Jones protein, and the one plasma cell in the blood smear should establish the diagnosis of myeloma.

As to the cause of symptoms, I think we must assume a gastrointestinal lesion in the upper intestinal tract; at least I would assume it. It is unusual but not unheard of to find a myeloma tumor outside the bone marrow. I am going to say that he has an ulcerative lesion in the stomach and upper intestinal tract. I think that he had vitamin B deficiency and anemia. All of these things will account for the symptoms.

I hope that Dr. Albright will explain the calcium findings.

My diagnosis is multiple myeloma, probably plasma cell type, with involvement of the stomach and upper gastrointestinal tract and vitamin B deficiency.

Clinical Discussion

Dr. Fuller Albright: I do not think the answer to why you have a high serum calcium in these conditions is altogether known. There are two possibilities. One is that the tumor is destroying a large amount of bone, resulting in more calcium and phosphorus entering the blood stream. This, together with the fact that the kidneys are often damaged so that their ability to excrete these substances may be impaired, would seem to offer an explanation of the high serum calcium and phosphorus value. I always supposed that was the cause, and it fits in with the fact that you get deposits of calcium in other tissues than bone. Very often in people who die you get calcium deposits in the lungs, in the mucous membrane of the stomach and in the kidneys. This fact suggests that the blood fluid contains more than the normal amount of calcium and phosphate ions. The other explanation is that the high serum calcium is due to the high serum protein. As you know, part of the calcium is held in a non-ionized form as serum protein. Now that we have a method of

measuring ionized serum calcium, it has been shown that serum protein times calcium ions equals a constant; so the higher the serum protein, the higher the calcium proteinate will be, and therefore the higher the total serum calcium, assuming a constant level of calcium ions. On the other hand, I know of a case that recently died who had a serum protein of eleven and a normal serum calcium level. This second explanation does not account for the calcium deposits in the lungs and so forth*.

In this case the phosphorus was high, along with the calcium, which favors the idea that the calcium was forced out from the bone into the blood stream. It should be parenthetically remarked here that the absence of a low serum inorganic phosphorus level in this condition in association with the high serum calcium level, is one of the main means of differentiating this condition and the other common disease with a high serum calcium, notably hyperparathyroidism.

In this hospital we do only total serum protein, not albumin-globulin ratios. Bence-Jones protein is an albumose. It might be that the subject would be clarified if we did the partitions in this condition.

DR. JACOBSON: It is worth recording that there was a precipitation with Hayem's solution in this case also.

CLINICAL DIAGNOSIS

Multiple myeloma.

DR. WYMAN RICHARDSON'S DIAGNOSES

Multiple myeloma, probably plasma cell type.
Vitamin B deficiency.

*Since this discussion it has been called to my attention that the diffusible calcium is increased in myeloma. This, of course, is in favor of the first hypothesis.

ANATOMIC DIAGNOSES

Multiple myeloma, diffuse.
Myeloma kidney.
Bronchopneumonia.
Cholelithiasis.

PATHOLOGIC DISCUSSION

DR. MALLORY: The autopsy on this case again showed very diffuse myeloma involving all the bones but this time without any discrete tumor nodules.

The kidneys were somewhat swollen and showed a moderate plugging of the tubules with the usual dense hyaline casts. The condition was not severe, but I think it is a recognizable grade of myeloma kidney.

The rest of the autopsy was essentially negative. We were unable to find anything in the gastrointestinal tract from top to bottom and we could not find any mass in the abdomen except a slightly enlarged liver.

Dr. Benedict, I meant to give you a chance to speak.

DR. EDWARD B. BENEDICT: I was in error, that is all. I believed I could make out an irregular surface through the gastroscope which suggested cancer, but it may have been due to gastritis. I think I may have been prejudiced by the suggestion of a mass and bleeding, although you can have bleeding with gastritis.

DR. MALLORY: In some of these cases we find a leukemic type of infiltration of some of the internal organs, especially the spleen, which may contain a very large number of plasma cells. In this case there was no involvement of the internal viscera.

DR. ALFRED KRANES: Were any stains done for amyloid of the gastrointestinal tract? It is occasionally described.

DR. MALLORY: It was not present in the liver, kidney, or spleen, the three places that it would ordinarily be seen.

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MEDICAL POETS

THE greatest poet that medicine can claim even as a near relation is John Keats. There have been, however, many physicians who have written creditable verse, some of whom can justifiably be classed as poets. Oliver Wendell Holmes is one of the outstanding examples of recent times. Of living men, physicians can point with pride to the verse of Sir Henry Head and Sir Charles Sherrington. Much of Head's poetry was stimulated by the war and during this period his outstanding contribution was, "I Cannot Stand and Wait", published first in the *Yale Review* and later included in a book, *Destroyers and Other Verses,* 1919. Sherrington's work first appeared in the *Oxford Magazine* and later was also issued in book form, *The Assaying of Brabantius and Other Verse,* 1925. Much of his poetry is delightful, particularly the shorter pieces. There are many touching phrases of sympathy and idealism and those who appreciate beauty, often so lacking in our routine daily lives, feel that Sherrington rightfully takes a place among the group of medical men who have adequately expressed in reputable verse their intimate thoughts.

There are, of course, many others who might be added to this brief list. For those who are interested attention should be called to the useful index of the *Bibliotheca Osleriana,* to Achille Chéreau's *Le Parnasse médical français,* 1874, Charles L. Dana's *Poetry and the Doctors,* 1916, and the preface to B. G. Morison's *Life: A Poem,* 1915. Two books of poetry have recently been added to this group. Dr. Merrill Moore, a psychiatrist, has long been devoted to the writing of verse. As one of a small group at Vanderbilt University he developed a leadership among the modern young poets, due particularly to his great facility in writing sonnets. His output of this form of verse must be considered enormous, for approximately 25,000 of them have been written by Dr. Moore. Of this great group a few have been gathered together into two volumes. The first, *The Noise That Time Makes,* was published in 1929 and received generous praise from the critics. A second volume, *Six Sides to a Man,* has only recently come to hand, being a publication of 1935. In these two volumes one will find much of interest. In spite of considerable unevenness, Dr. Moore at times strikes unusual depths: rather suddenly one comes upon a line of great beauty. There are many medical allusions, which will bring before the physician familiar sensations, not only of hearing, but of sight, taste and smell. Some of these verses may find their way into permanent literature.

THE EFFECT OF THE DEPRESSION

ON January 1, two important hospitals in New York City closed their doors. These are the Nursery and Child's Hospital and the St. Mary's Hospital for Children. The first is the second oldest children's hospital in the United States and the other is the third oldest children's hospital.

These are the victims of the depression. Both have contributed valuable services to their patients and were also of importance in advancing medical education, for physicians from the United States and Canada made pilgrimages to these institutions for postgraduate instruction.

A letter in the *New York Times* suggests that money appropriated for zoos, game preservation and similar projects would yield larger dividends in human life of more importance if applied to hospitals than many of the expenditures of public money now made.

It is probable that all of the important problems of the depression have not been carefully studied and solved.

MEDICAL ECONOMICS

THE medical profession is showing a very definite interest in the economic problems of medical care throughout the country because of the inclusion of individual and community perplexities. There is agreement of the public and practitioners that illness must be given adequate service and the physician must have his due recompense, but just how their dual obligations can be met is one of the important questions of the day.

In times of general prosperity, the average well-equipped doctor felt no great concern about his income and was willing to sandwich in a fair proportion of charity work with his paying clientele, but now he is too often giving an undue share of time to free service so that he is participating in the anxieties of the average citizen, in the difficulties imposed by the general depression. Many experiments which provide for prepayment of hospital bills are under way, but fewer which arrange for the payment of physicians' fees by the low income groups are in operation.

In order to clarify the situation, the Massachusetts General Hospital monthly conference will be given over to a consideration of medical economics at the meeting arranged for February 28. Well-qualified speakers have been secured for this occasion, as will be seen in the program which appears on page 365 of this issue.

The medical public is cordially invited to attend this meeting.

THE MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

MASSACHUSETTS was represented by its full quota at this convention. The first forenoon was given to a general discussion of forms and principles of insurance with the expression of a wide variety of opinions.

In order to express the consensus of the delegates and formulate conclusions, a reference committee was appointed. The report of this committee appears on page 360 of this issue, and sets forth the position of organized medicine with respect to insurance to meet the costs of illness. This document was adopted by the House of Delegates and a motion was offered, directing the delegates to ask for a meeting of the several State Medical Societies to consider the conclusions of the House of Delegates. This motion was lost on a vote of sixty-four to sixty-three, with many not voting, apparently on the ground that, since the regularly appointed delegates had acted for the several Societies, the great expense involved in a special meeting of the Societies is unwarranted.

This report shows definitely the trend in the sentiment of physicians toward such forms of insurance as are designed to protect the medical profession from undue invasion of the proper relation of doctor and patient. Whether this will have the desired effect on legislation is of great interest.

The unfortunate situation is that this delayed action by the profession has placed in the hands of politicians an opportunity to take the initiative as shown in the bill before Congress and others before state legislatures.

Medicine is now on the defensive, but every effort should be made to establish leadership in legislation relating to this subject.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

HOWARD, MARION E. M.D. Johns Hopkins University School of Medicine 1931. Resident, New Haven Hospital. Address: New Haven Hospital, New Haven, Conn. Associated with her is

STRAUSS, MAURICE J. M.D. Columbia University College of Physicians and Surgeons, 1917. Assistant Clinical Professor of Dermatology, Yale University School of Medicine. Address: 41 Trumbull Street, New Haven, Conn. Their subject is "Lymphogranuloma Inguinale." Page 323.

BRIGGS, PAUL R. M.D. Tufts College Medical School 1931. Captain and Assistant Resident Surgeon, Soldiers Hospital of Connecticut. His subject is "Granuloma Inguinale." Page 330. Address: Soldiers Hospital, Norton Heights, Conn.

SMITH, LEMUEL D. B.Litt., B.S., M.D. Marquette University School of Medicine 1921. F.A.C.S. Instructor, Marquette University School of Medicine; Member, Attending Staff, St. Anthony's, Misericordia, Milwaukee Children's and Milwaukee County General Hospitals. Member, Visiting Staff, St. Joseph's Hospital. His subject is "Patellae Bipartite." Page 331. Address: 2454 West Kilbourn Avenue, Milwaukee, Wisconsin.

ADAIR, FRANK E. A.B., D.Sc. (Hon.), M.D. Johns Hopkins University School of Medicine 1915. F.A.C.S. Executive Officer and Attending Surgeon, Memorial Hospital. His subject is "The Diagnosis and Treatment of Breast Lesions." Page 336. Address: 70 East 77th Street, New York City.

ROCK, TIMOTHY F. M.D. Tufts College Medical School, 1907. On staff of Memorial Hospital and St. Joseph's Hospital, Nashua, N. H. His subject is "Questions Before the Medical Profession." Page 341. Address: 77 Main Street, Nashua, N. H.

COLBY, FLETCHER H. B.S., M.D. Harvard University Medical School, 1918. F.A.C.S. Associate Urologist, Massachusetts General Hospital. Assistant Urologist, Palmer Memorial Hospital and Huntington Memorial Hospital. Assistant in Genito-Urinary Surgery, Harvard Medical School. Urological Consultant, Lakeville State Sanatorium, Lakeville. His subject is "Progress in Urology, 1933." Page 346. Address: 205 Beacon Street, Boston.

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140 Rock Street,
Fall River, Mass.

C. J. KICKHAM, M.D.,
Secretary,
524 Commonwealth Avenue,
Boston, Mass.

WHAT IS THE RELATION OF BACKACHE TO PELVIC PATHOLOGY?*

ROBERT W. JOHNSON, JR., writing in Kelly's Gynecology on the subject of "backache", closes his chapter with the following paragraph: "It thus seems clear that the region of the lower back and pelvis, the site of so much distress from 'backache', is in reality an advantageous rendezvous for gynecologist, orthopedist, neurologist, internist, and even psychiatrist, one or all aiding and supplementing one another in the effort to untangle a symptom-complex which may objectively reveal a uterine displacement, abscessed teeth, bone tuberculosis, developmental anomaly, spinal cord lesion, a pure neurosis, or one of a variety of associated or intermediate conditions." This quotation I believe correctly expresses our present situation in regard to "backaches" in general. Probably ever since woman assumed the upright position, certainly for the past century during which medical records have been kept, the symptom of backache has given the physician a fertile field for investigation and therapy.

Confining our discussion to backache in relation to pelvic pathology we find that an entirely new viewpoint has been evolved in the past few years. Thirty years ago almost any pelvic lesion and especially any supposed malformation, was regarded as a definite cause of backache—the retroposed uterus, the lacerated cervix or perineum, the prolapsed ovary, fibroids, etc. Suspensions of the uterus were especially prevalent as witnessed by the multitude of operations devised to "cure" this supposed anomaly, and the chief symptom for which a majority of suspensions were done, as well as repairs of lacerations, was backache. As time has gone on we have come to realize that the backaches recurred in spite of our operations until at present we find that we cannot *promise* permanent relief of backache from these operations. Few indeed are the cases of backache which are permanently cured by the operation of suspension of the uterus whether or not combined with repair of lacerations.

Pressure of a retroverted fundus as well as that of even huge fibroid tumors must also be generally discarded as a sole cause of backache. Backache is seldom the main complaint in these cases although it may be associated with them, and therefore, one must be cautious in promising complete relief of backache following removal of even large tumors.

Undoubtedly some pelvic conditions do contribute to discomfort in the lower lumbar and sacral regions. These are largely conditions where drag, and not pressure, is present. Constant drag of an unrelieved prolapse, chiefly on the uterosacral and infundibulopelvic ligaments with their surrounding parietal peritoneum and included vessels and nerves, is a very probable cause of low backache which will be relieved by curing the condition. The extensive inflammatory lesions are also an undoubted cause of low backache.

When a patient complains of backache as a prominent symptom one must, even in the presence of most pelvic pathology, be guarded in one's prognosis as to complete relief until the back has been studied and investigated from every angle. It is probably true that fewer cases of backache are caused *solely* by some pelvic pathology than by other, possibly associated, conditions.

*A series of short selected articles by members of the Section will be published weekly.
Comments and questions by subscribers are solicited and will be discussed by members of the Section.

MASSACHUSETTS LEGISLATIVE NOTE

H. 1157. The chiropractors are seeking recognition through House Bill 1157.

The advocates of this legislation, evidently not discouraged by repeated refusals of the Legislature and the State at large, through a referendum, are again engaged in a campaign to secure registration of this cult.

Recital of alleged benefits in dealing with illness and testimony of a large number who claim to have been cured by chiropractic manipulation will be presented before the Committee on Public Health, Room 450, State House, on March 7, at 10:30 A.M.

Opposition should be shown by all interested in scientific medicine. Doctors, especially, should be present to support the Committee on Legislation of the Massachusetts Medical Society at the hearing.

MISCELLANY

REPORT OF THE REFERENCE COMMITTEE

SPECIAL SESSION HOUSE OF DELEGATES,
FEBRUARY 15 AND 16, 1935

Your reference committee, believing that regimentation of the medical profession and lay control of medical practice will be fatal to medical progress and inevitably lower the quality of medical service now available to the American people, condemns unreservedly all propaganda, legislation or political manipulation leading to these ends.

Your reference committee has given careful consideration to the record by the Board of Trustees of the previous actions of this House of Delegates concerning sickness insurance and organized medical care and to the account of the measures taken by the Board of Trustees and the officials of the Association to present this point of view to the government and to the people.

The American Medical Association, embracing in its membership some 100,000 of the physicians of the United States, is by far the largest medical organization in this country. The House of Delegates would point out that the American Medical Association is the only medical organization open to all reputable physicians and established on truly democratic principles, and that this House of Delegates, as constituted, is the only body truly representative of the medical profession.

The House of Delegates commends the Board of Trustees and the officers of the Association for their efforts in presenting correctly, maintaining and promoting the policies and principles, heretofore established by this body.

The primary considerations of the physicians constituting the American Medical Association are the welfare of the people, the preservation of their health and their care in sickness, the advancement of medical science, the improvement of medical care, and the provision of adequate medical service to all the people. These physicians are the only body in the United States qualified by experience and training to guide and suitably control plans for the provision of medical care. The fact that the quality of medical service to the people of the United States to-day is better than that of any other country in the world is evidence of the extent to which the American medical profession has fulfilled its obligations.

The House of Delegates of the American Medical Association reaffirms its opposition to all forms of compulsory sickness insurance whether administered by the Federal government, the governments of the individual states or by any individual industry, community or similar body. It reaffirms, also, its encouragement to local medical organizations to establish plans for the provision of adequate medical service for all of the people, adjusted to present economic conditions, by voluntary budgeting to meet the costs of illness.

The medical profession has given of its utmost to the American people, not only in this but in every previous emergency. It has never required compulsion but has always volunteered its services in anticipation of their needs.

The Committee on Economic Security, appointed by the President of the United States, presented in a preliminary report to Congress on January 17 eleven principles which that Committee considered fundamental to a proposed plan of compulsory health insurance. The House of Delegates is glad to recognize that some of the fundamental considerations for an adequate, reliable and safe medical service established by the medical profession through years of experience in medical practice are found by the Committee to be essential to its own plans.

However, so many inconsistencies and incompatibilities are apparent in the report of the President's Committee on Economic Security thus far presented that many more facts and details are necessary for a proper consideration.

The House of Delegates recognizes the necessity under conditions of emergency for federal aid in meeting basic needs of the indigent; it deprecates, however, any provision whereby federal subsidies for medical services are administered and controlled by a lay bureau. While the desirability of adequate medical service for crippled children and for the preservation of child and maternal health is beyond question, the House of Delegates deplores and protests those sections of the Wagner Bill which place in the Children's Bureau of the Department of Labor the responsibility for the administration of funds for these purposes.

The House of Delegates condemns as pernicious that section of the Wagner Bill which creates a social insurance board without specification of the character of its personnel to administer functions essentially medical in character and demanding technical knowledge not available to those without medical training.

The so-called Epstein Bill, proposed by the American Association for Social Security now being promoted with propaganda in the individual states, is a vicious, deceptive, dangerous and demoralizing measure. An analysis of this proposed law has been published by the American Medical Association. It introduces such hazardous principles as multiple taxation, inordinate costs, extravagant administration and an inevitable trend toward social and financial bankruptcy.

The committee has studied this matter from a broad standpoint, considering many plans submitted by the Bureau of Medical Economics as well as those conveyed in resolutions from the floor of the House of Delegates. It reiterates the fact that there is no model plan which is a cure-all for the social ills any more than there is a panacea for the physical ills that affect mankind. There are now more than 150 plans for medical service undergoing study

and trial in various communities in the United States. Your Bureau of Medical Economics has studied these plans and is now ready and willing to advise medical societies in the creation and operation of such plans. The plans developed by the Bureau of Medical Economics will serve the people of the community in the prevention of disease, the maintenance of health and with curative care in illness. They must at the same time meet apparent economic factors and protect the public welfare by safeguarding to the medical profession the functions of control of medical standards and the continued advancement of medical educational requirements. They must not destroy that initiative which is vital to the highest type of medical service.

In the establishment of all such plans, county medical societies must be guided by the ten fundamental principles adopted by this House of Delegates at the annual session in June, 1934. The House of Delegates would again emphasize particularly the necessity for separate provision for hospital facilities and the physician's services. Payment for medical service, whether by prepayment plans, installment purchase or so-called voluntary hospital insurance plans, must hold, as absolutely distinct, remuneration for hospital care on the one hand and the individual, personal, scientific ministrations of the physician on the other.

Your Reference Committee suggests that the Board of Trustees request the Bureau of Medical Economics to study further the plans now existing and such as may develop, with special reference to the way in which they meet the needs of their communities, to the costs of operation, to the quality of service rendered, the effects of such service on the medical profession, the applicability to rural, village, urban and industrial population, and to develop for presentation at the meeting of the American Medical Association in June model skeleton plans adapted to the needs of populations of various types.

(Signed)

Dr. Harry H. Wilson, *Chairman*, California,
Dr. Warren F. Draper, Virginia,
Dr. E. F. Cody, Massachusetts,
Dr. E. H. Carey, Texas,
Dr. N. B. Van Etten, New York,
Dr. F. S. Crockett, Indiana,
Dr. W. F. Braasch, Minnesota.

DR. FAXON TO BE THE DIRECTOR OF THE MASSACHUSETTS GENERAL HOSPITAL

In order to fill the vacancy caused by the absence of Dr. George H. Bigelow, Dr. Nathaniel W. Faxon has been appointed Director of the Massachusetts General Hospital.

Dr. Faxon was born in Braintree in 1880, graduated from Harvard College in 1902, and from the Harvard Medical School in 1905. He served as interne at the Massachusetts General Hospital, practiced with his father for a time in Stoughton, Massachusetts, served as a member of the local board of health, as instructor in surgery at Tufts College Medical School, and during the World War served in the Aisne-Marne operations as well as in other positions at the front. He subsequently occupied the position of Assistant Director to Dr. F. A. Washburn. Since 1922, Dr. Faxon has been director of the Strong Memorial Hospital at Rochester, New York, where he was recognized as an able administrator.

In returning to Boston, Dr. Faxon will be cordially received by the medical profession.

THE RETIREMENT OF DR. WINTERNITZ

The report that Dr. Milton C. Winternitz, Dean of the Yale Medical School, will retire from the position in June of this year is current. Dr. Stanhope Bayne-Jones, Professor of Bacteriology, has been appointed to succeed Dr. Winternitz.

During Dr. Winternitz' administration the endowment of the Yale School of Medicine has been increased from about two million to over eight million, by gifts.

Dr. Bayne-Jones received his A.B. degree from Yale and his M.D. from Johns Hopkins.

Dr. Winternitz will continue as Professor of Pathology.

CORRESPONDENCE

A TRIBUTE TO DR. H. S. WAGNER

Editor, *New England Journal of Medicine*,

One spring morning a few years ago there came to my office a sprightly, kindly faced man who introduced himself as Dr. Wagner from Barnstable County Sanatorium, Pocasset, Mass. He had come to discuss a number of cases he was treating with pneumothorax. He was thoroughly versed in his subject and extremely earnest. As the conversation progressed we became cordial friends for there was much in common, in our views and the course to pursue in treating pulmonary tuberculosis. That was the first of many meetings at my office, at the Massachusetts General Hospital, and my occasional visits at Pocasset.

Dr. Wagner was one of those who endeared himself to his patients and to all others with whom he came in contact. He was never assertive in his manner though thoroughly familiar with his subject and ever ready to seek advice for the benefit of his patients. His untimely death, in his mature years, has robbed the community to which he devoted himself, of an able, inspiring physician who gave of himself unsparingly to his patients.

He had a charming personality and in his death we have lost a friend and delightful companion.

Gerardo M. Balboni, M.D.

February 9, 1935.

RECENT DEATHS

HOEY — WARREN HENRY HOEY, M.D., of 65 Oak Street, Newton Upper Falls, died at his home, December 31, 1934. He was born in 1881 and graduated from the Harvard Medical School in 1902.

He joined the Massachusetts Medical Society in 1920.

WHITING — GEORGE WASHINGTON WHITNEY WHITING, M.D., of 50 Sagamore Avenue, West Medford, Mass., died February 14, 1935. He was born in Carmel, Maine, in 1864, and after being educated at a preparatory school and at Bowdoin College, matriculated at the New York University Medical School, graduating in 1887. He settled in West Medford where he developed a considerable practice which included Somerville. Dr. Whiting was a member of the Somerville Hospital Staff for many years and consulting physician at the Lawrence Memorial Hospital in Medford.

He was a Fellow of the Massachusetts Medical Society and the American Medical Association.

He is survived by his widow, Mrs. Alice Hoyt Whiting; a daughter, Miss Carol Whiting; a son, Richard Whiting, of Medford, and a sister, Mrs. Elizabeth Knight, of Carmel, Maine.

OBITUARY

RESOLUTIONS ON THE DEATH OF DR. C. H. DOBSON

Whereas, In the death of Clarence Henry Dobson, our hospital has lost an honored and efficient member, held in high esteem, and

Whereas, We, the Staff of the Massachusetts Memorial Hospitals, keenly feeling our loss, desire to express our appreciation of his kindly qualities, his coöperation with his colleagues and his patients, his loyalty to our Hospital and School, and to extend our sympathy to his family.

Therefore, Be it resolved that this resolution be entered upon our records and copies sent to Dr. Dobson's family, and to The *New England Journal of Medicine*.

Respectfully submitted,
WILSON F. PHILLIPS,
WILLIAM D. ROWLAND,
FRANK H. BARTON,
Committee.

NOTICES

CLINIC AT THE PETER BENT BRIGHAM HOSPITAL

At 3:30 P.M. on Thursday, February 28, in the Amphitheatre of the Peter Bent Brigham Hospital, Dr. E. S. Emery, Jr., will give a clinic on "The Treatment of Peptic Ulcer." To it are cordially invited practitioners and medical students.

On Saturdays in the wards of the Peter Bent Brigham Hospital, from 10 to 12, staff rounds will be conducted by Dr. Christian. These are open to all physicians.

LECTURES AT THE YALE UNIVERSITY SCHOOL OF MEDICINE

Another lecture in the series on the backgrounds of medical practice, sponsored by the Department of Public Health at the Yale University School of Medicine, has been announced for March 4. Professor Edward Sapir, head of the department of Anthropology at Yale University, will speak on "Human Beings as Personalities." The first three lectures in the series were given by Professor Henry E. Sigerist of Johns Hopkins University last month, and the fourth by Professor Sapir on February 18.

The purpose of the series is to help medical students, especially, to gain a broader view of human society and the rôle which medicine plays in it.

AWARD

The New England Society of Psychiatry, at its next Spring meeting will make two awards, one of $100.00 and one of $50.00, to the writer (or writers) of the best papers completed or published during the calendar year of 1934 embodying *research in psychiatry* by a younger worker (or workers). Physicians, psychologists, social workers, and others are eligible. Membership in the Society is not a requisite.

Writers who have once received an Award are not again eligible. Seasoned writers, senior physicians, or heads of departments in which there are junior workers, while not inevitably excluded, will not generally be regarded as eligible for the Awards.

The work on which the papers are based should preferably have been done in New England or by workers now living in New England.

The papers will be examined by a Committee of three members who are accustomed to reviewing papers, and by the Executive Committee of the Society. They will be judged on the basis of their scientific quality.

Copies of articles or marked copies of journals in which the articles appeared should be sent before March 15, 1935, to the Secretary of the Society.

Superintendents of institutions, public or private, for the care of mental patients in New England are requested to post this notice and to send to the Secretary a list of such papers published by the members of their staffs as they think entitled to be considered for the Awards.

HARLAN L. PAINE, M.D., *Secretary*.

North Grafton, Mass.

REPORTS AND NOTICES OF MEETINGS

CLINICAL MEETING OF THE MASSACHUSETTS GENERAL HOSPITAL

A clinical meeting was held at the Massachusetts General Hospital on the evening of January 17. Dr. Allen called the meeting to order and Dr. Soley presented a case of a thirty-five year old Negro who has had intermittent attacks of asthma since he had influenza in 1918. It has occurred in several localities and at all times of year and he has a positive skin test for timothy and ragweed. On three occasions attacks have followed the administration of aspirin and this was the precipitating factor in the present attack. He had been in the hospital for one week suffering from status asthmaticus and was too ill to be present in person.

The first paper of the evening was on the subject of "Asthma in Children" and was presented by Dr. E. S. O'Keefe. In this analysis of three hundred cases in patients under fourteen years of age, it was found that some cases developed as early as the second month of extrauterine life, that ten per cent had begun in the first year, and that sixty-six per cent had started in the first six years of life. A positive family history for allergy did not change the average age of onset. Thirty-eight per cent had a positive family history and in this group it was found that they were more prone to develop other allergic manifestations than those who had a negative allergic family history. Apparently it is the tendency for allergic families to transmit the same allergic condition to their offspring rather than other similar allergic diseases. The pollens as etiological factors in the asthma of children are unimportant before the ninth year, after which they become of major import. In the early years of life, the food allergies are most frequent, and eggs, wheat, milk, and potatoes are the chief offenders. In adult life, perhaps due to a natural desensitization, the foods are of less significance in the etiology of asthma.

Dr. B. T. Guild spoke on "eczema" as an allergic manifestation both localized and generalized. It may be hereditary or acquired and the clinical picture may be confused by secondary infection. An extensive allergic history which should require some two and one-half hours to take is of the uttermost importance. Scratch, intradermal, and patch tests should be done, and infectious foci must be eliminated. Fifty per cent of these cases are well on the way to recovery some two or three days after hospitalization, but their difficulty often returns almost immediately when they go home. Allergic eczema may be due to contact or inhalation or ingestion of substances to which the patient is sensitive. Dyes, fungi, and metals, as well as numerous other factors, are important as etiological agents in allergic dermatitis.

Dr. A. Colmes spoke on "Skin Tests" and pointed out the many difficulties encountered in drawing definite conclusions from these. Tests which are repeated at a different time and in different places on the skin often change from negative to positive and vice versa. A number of slides were shown to demonstrate these facts and one case was mentioned where a patient gave a positive skin test for beans at one site, but this same test was negative at twelve other sites. A careful correlation with symptoms showed that in asthma only forty per cent of the positive skin tests were of importance; in vasomotor rhinitis twenty-five per cent were of importance; in urticaria four per cent; in hay fever almost one hundred per cent. Of the whole group only twenty-seven per cent of the positive tests were of clinical importance. It is seen from this study that, although the skin test is of definite value in hay fever, it is of comparatively little value in asthma and vasomotor rhinitis and it is of no importance in urticaria.

Dr. F. M. Rackemann gave a discussion of "Common Allergens." He pointed out the increasing importance of the history and the decreasing significance of the skin test. Four out of five cases of asthma entering the Massachusetts General Hospital quickly recover because they have been removed from the causative factor which is usually present in their homes. House dust and "kapok" are "poor allergens" because they give doubtful reactions in a great many people and are therefore hard to interpret. A "good allergen" gives a typical wheal in a few cases and a negative reaction in most cases of routine testing.

If a person is sensitive to a great many animal sera and is desensitized with guinea-pig serum, he becomes desensitized to all the other animal sera at the same time. It seems, therefore, that there are two factors in all animal sera one of which factors is common in all mammalian species, the other one being specific for each species.

"Kapok" is often called silk floss and is a cheap stuffing material for furniture and bedding, in particular pillows and mattresses. It is a very common cause of asthma and when the patients are removed from its presence their symptoms clear rapidly. It comes from a tropical plant, and when new, consists of long fibres which do not cause trouble. However, it is infected with a mold which gradually causes the breakdown of the fibres into small particles that arise as dust and are responsible for the clinical symptoms. It may be that the mold is responsible for the skin reactions.

In considering the drug group of allergens, it is always wise to believe one's patients and not to give them drugs to which they say they are sensitive, for there is a small but definite group that cannot take such drugs as aspirin without a severe reaction.

Dr. Hill gave a short discussion in which he distinguished four types of eczema: first, seborrheic eczema; secondly, atropic (mostly infantile); thirdly, contact; and fourthly, mycotic eczema. Most adult eczema is of the contact variety where there

is a sudden onset and no family history. The sensitivity in this type is in the epidermis; so that patch tests are positive, while scratch tests are negative. There is a vesiculation usually which gives an appearance similar to poison ivy. Infection with the fungi may be primary or superimposed upon an eczema, and the most common offenders are the mycelia and the trichophyton.

HARVARD MEDICAL SOCIETY

On January 22 a meeting of the Harvard Medical Society was held at the Peter Bent Brigham Hospital. Dr. Merrill C. Sosman presided. The first case was presented by Dr. Ingalls. A forty-two year old carpenter first complained of the symptoms of peptic ulcer seven years ago, and experienced the sudden pain of a perforation two years later. A posterior gastro-enterostomy was done, and five years ago he developed diarrhea at which time an x-ray showed a gastrocolic fistula which was repaired. Last April he again developed symptoms of peptic ulcer. A physical examination was essentially negative; the stool showed a one plus guaiac; the free acid was ninety-three and the total one hundred and ten. Dr. Emery in a discussion of this case said that the flushed face, the bright eyes, and moist palms are those of a type of individual who is prone to develop jejunal ulcers, and he has seen two other similar cases with a gastrocolic fistula. This group of patients is also likely to develop alkalosis while on Sippy management. Dr. Sosman pointed out the x-ray evidence of thickened, hypertrophic rugae indicative of gastritis.

Dr. Reiter presented a forty-eight year old male who, thirty-six hours before entry, had experienced an annoying epigastric pain relieved by supper, and four hours later a severe colicky pain in the same region radiating to both shoulders. For twenty years he had had the dull pain of an ulcer, and had been a known diabetic for four years. At a local hospital he was diagnosed as a psychoneurotic. Physical examination showed tenderness and spasm in the right upper quadrant. He had a white count of 11,000 with ninety per cent polymorphonuclears, a four plus sugar, and a one plus acetone in his urine, as well as a temperature of one hundred. His temperature was ninety-nine and two-tenths degrees, and his white count 19,000; his chest and abdomen were negative by x-ray. Dr. Homans discussed the diagnosis and suggested the possibility of appendicitis, although the patient remarked that his appendix had been removed in 1898. Nevertheless, Dr. Cheever upheld the possibility of Dr. Homans' diagnosis by saying that the appendix is not infrequently present when the patient believes it to be out, or the appendix stump is the seat of an inflammatory process.

Dr. Cutler spoke briefly on the Emergency Campaign.

Dr. J. Schloss from the New England Medical Center spoke on "Gastroscopy and Optic Esophagoscopy." Kussmaul successfully visualized and correctly diagnosed a carcinoma of the stomach, but after several fatalities he gave up the procedure. In 1932 Wolff invented a new flexible gastroscope with a system of lenses in a semi-rigid tube constructed in a fish scale manner. This instrument is now used with safety in a number of clinics particularly in Europe. Its use requires considerable experience, and after anesthesia of the mouth and pharynx, it is introduced into the esophagus with the patient lying on his left side. Dr. Schloss discussed the optics involved, and said that the retrograde optic allows a good view of regions invisible by a straight tube, but the problem of visualizing the posterior wall has not yet been solved. He also demonstrated a new esophagoscope which is much smaller than the old type, and which employs a rubber finger cot over the end which can be blown up, so as to afford a view of the wall of the distended esophagus, thus giving much better optical effect.

In speaking of the need for gastroscopy the speaker pointed out that gastric ulcers are frequently not seen by the x-ray, and that severe gastritis alone can cause pain. In a series of excellent lantern slides, pictures of the normal gastric mucosa and of chronic gastritis as seen through the gastroscope were shown. He concluded by speaking of the value of this instrument from the point of view of clinical investigation, as well as diagnosis, and then showed several pictures of ulcer and carcinoma as they appear through this instrument.

Dr. Richard Schatzki from the Massachusetts General Hospital spoke on "The X-Ray Findings in Finer Lesions of the Stomach and Their Relationship to Gastroscopy." After a brief review of the development of the x-ray and its use in diagnosis, he discussed the modern method of recognizing slight changes in the gastric mucosa by the relief method of a thin coating of barium which fills the valleys of the mucosa only. The rugae on the anterior wall are normally more pliable and slightly more tortuous than those on the posterior wall. In gastritis the rugae become wider, higher, more tortuous, and more rigid. The x-ray diagnosis of hypertrophic gastritis does not always correspond with the same diagnosis of the gastroscopist, since there are a few cases where actual visualization shows the mucosa to be either normal or atrophied. One cannot say that a negative x-ray excludes gastritis; positive findings are more conclusive. The ulcerative type of gastritis is very difficult to show by x-ray, as the ulcerations are very shallow and there is a good deal of secretion. An x-ray diagnosis must never be made on one sign without the support of others. The gastroscope is a definite aid to the roentgenologist in visualizing gastritis which is rarely seen at autopsy.

The advantages of the gastroscope over the x-ray are chiefly in the finer changes, although the distinction of color is of definite aid. Advantages of the x-ray are that it is easier, more practical, and one can visualize all the parts of the stomach, while

some areas cannot be seen with the gastroscope. The description of the extent of a lesion by x-ray is easier, and the observation of peristalsis, as well as palpation and rigidity, make the x-ray superior in diagnosing changes of the deeper layers of the stomach wall.

In conclusion it may be said first, that a large number of cases of gastritis are entirely negative to x-ray, and a few are wrongly diagnosed; secondly, that large ulcers are easier to demonstrate by x-ray, but small ones together with malignant changes in an ulcer are more readily diagnosed by the gastroscope; and thirdly, tumors are more definitely diagnosed by x-ray, although when very small the gastroscope is superior. There is no doubt but that the most desirable procedure is to have these two methods of diagnosis supplement each other.

In the discussion which followed, Dr. Cutler asked the pathological significance of gastritis, to which Dr. Schatzki answered that it is difficult to say where pathological changes begin, but that the true picture represented a real inflammation. In answer to Dr. Homans he said that it is rare to find definite gastritis without subjective symptoms, and that gastritis is both an anatomical and clinical disease.

PHI DELTA EPSILON FRATERNITY

The next Open Meeting of the Phi Delta Epsilon Fraternity of Boston University School of Medicine will be held on Monday, February 25, at the Massachusetts Memorial Hospitals (Evans Auditorium), 80 East Concord Street, at 8 P.M.

PROGRAM

Speaker: Dr. W. B. Castle, Associate Professor of Medicine, Harvard Medical School.
Subject: "A Modern Classification of the Anemias."
Discussion: Dr. H. Ulrich, Associate Professor of Clinical Pathology, Boston University School of Medicine.
Chairman: Dr. A. S. Begg, Dean, Boston University School of Medicine.

SYDNEY GRACE,
Chairman of Program Committee.

MASSACHUSETTS GENERAL HOSPITAL

CLINICAL MEETING, THURSDAY, FEBRUARY 28, 1935

Moseley Memorial Building, 8:15-10 P.M.

PROGRAM

Subject: Physicians, Patients and Pay.

1. A Summary of the Problem as a Whole. Channing Frothingham, M.D., Physician-in-Chief, Faulkner Hospital.
2. Accomplishments in Other Communities and Countries. Douglass Brown, Assistant Professor, Medical Economics, Harvard Medical School.
3. Legislative Trends, Local and National. Alexander S. Begg, M.D., Dean, Boston University School of Medicine.

Physicians, medical students, nurses and social workers are cordially invited.

Committee on Hospital Meetings:
ARTHUR W. ALLEN, *Chairman*,
WILLIAM B. BREED, *Secretary*.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY

A meeting will be held at noon in the Hotel Continental, Cambridge, Mass., on Thursday, March 7, 1935.

The speaker will be Dr. Harold A. Chamberlin, Professor of Urology at the Tufts College Medical School.

Topic: "Hematuria — Its Significance as a Symptom." Illustrated by lantern slides.

The medical paper will be preceded by a luncheon and business meeting.

ALEXANDER A. LEVI, M.D., *Secretary*.

GREATER BOSTON BIKUR CHOLIM HOSPITAL

The medical staff of the Greater Boston Bikur Cholim Hospital will hold its next regular meeting on Wednesday evening, February 27, at 8:30 o'clock, at 45 Townsend Street, Roxbury. Dr. Herrman L. Blumgart will speak on "Total Thyroidectomy as a Therapeutic Measure in Cardiac Diseases." Members of the medical profession are invited.

MAURICE GERSTEIN, M.D.,
Chairman of Staff.
NATHAN FRIEDMAN, M.D.,
Secretary of Staff.

GREATER BOSTON MEDICAL SOCIETY

Wednesday, March 13, 1935, Postgraduate Clinic Day at Beth Israel Hospital.

Symposium on Diabetes Mellitus, 9:30 A.M.-12:30 P.M.

Luncheon, 12:30-1:30 P.M.

Symposium on Biliary Tract Diseases, 1:30 P.M.-4:30 P.M.

The Annual Dinner-Dance will be held at the Copley-Plaza Hotel.

Apply to David B. Stearns, M.D., 485 Commonwealth Avenue, Boston, Mass., for particulars.

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance) Tuesday evening, February 26, at 8:15 P.M.

PROGRAM

Presentation of Cases.

Your Profession and Society. By Dr. John A. Hartwell, Professor of Clinical Surgery, Cornell University Medical School, former President of New York Academy of Medicine.

MARSHALL N. FULTON, M.D., *Secretary*.

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

CALENDAR OF BOSTON DISTRICT FOR THE WEEK BEGINNING MONDAY, FEBRUARY 25, 1935

Monday, February 25—

*8:30 A.M. Lecture and Clinic on Heart Disease by Dr. Christian. Peter Bent Brigham Hospital.

8 P.M. Phi Delta Epsilon Fraternity. Massachusetts Memorial Hospitals, 80 East Concord Street, Boston.

8:15 P.M. New England Heart Association. Children's Hospital, Boston.

Tuesday, February 26—

1:30 P.M. Radio Program—WEEI. "Nuisances."

†2:30-4 P.M. Ward visit, Massachusetts Eye and Ear Infirmary.

†4-5 P.M. Seminar, Pediatric Laboratory, Massachusetts General Hospital.

4:30 P.M. Radio Program—WBZ. "Pulmonary Tuberculosis."

8:15 P.M. Harvard Medical Society. Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance).

Wednesday, February 27—

8 P.M. Massachusetts Psychiatric Society. Boston Psychopathic Hospital.

*8:30 P.M. Greater Boston Bikur Cholim Hospital, 45 Townsend Street, Roxbury.

Thursday, February 28—

*12 M. Clinico-Pathological Conference. Massachusetts General Hospital.

†12 M. Clinico-Pathological Conference. Children's Hospital.

*3:30 P.M. Medical Clinic. Dr. E. S. Emery, Jr. Peter Bent Brigham Hospital.

†4:30 P.M. Surgical Clinic. Children's Hospital Amphitheatre.

*8:15-10 P.M. Massachusetts General Hospital, Clinical meeting. Moseley Memorial Building.

Friday, March 1—

†12 M. Clinical meeting of Children's Medical Staff, Massachusetts General Hospital. Ether Dome.

5 P.M. Radio Program—WEEI. Asthma.

Saturday, March 2—

*10-12. Medical Staff Rounds. Dr. Christian. Peter Bent Brigham Hospital.

Sunday, March 3—

4 P.M. Harvard University. (Medical School, Building D, Longwood Avenue, Boston.) Free lecture. "Cancer." Dr. E. C. Cutler.

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*Open to the medical profession.
†Open to Fellows of the Massachusetts Medical Society.

February 25—New England Heart Association will meet at the Children's Hospital, Boston, at 8:15 P.M.

February 25—Phi Delta Epsilon Fraternity. See page 365.

February 26—Harvard Medical Society. See page 365.

February 27—Massachusetts Psychiatric Society will meet at the Boston Psychopathic Hospital at 8 P.M.

February 27—Greater Boston Bikur Cholim Hospital. See page 365.

February 28—Clinic at the Peter Bent Brigham Hospital. See page 362.

February 28—Massachusetts General Hospital, Clinical Meeting. See page 365.

March-May—International Medical Postgraduate Courses in Berlin. Programs and further particulars are obtainable from the Berlin Academy for Medical Postgraduate Training, Berlin NW7, Robert Koch-Platz 7 (Kaiserin Friedrich-Haus).

March 8—William Harvey Society. Dr. Percy S. Pelouze, University of Pennsylvania, will speak on "Neisseriana."

March 11, 12, 13—Surgeons to meet in Jacksonville, Florida (Southeastern Surgical Congress). See page 83, issue of January 10.

MASSACHUSETTS DIETETIC ASSOCIATION

March 12—Tuesday, 8 P.M. "The Effect of Diet on Anemia," Dr. Lewis Diamond, Instructor in Medicine, Harvard University Medical School, Associate Physician, Children's Hospital.

March 19—Tuesday, 2 P.M. Field Trip: Visit Storehouse, First National Stores.

April 9—Tuesday, 8 P.M. "Small Hospital Problems," Miss Margaret Copeland, Superintendent, Free Hospital for Women.

March 13—Greater Boston Medical Society. See page 365.

April 29 - May 3, 1935—The American College of Physicians will meet at Philadelphia. For information address Mr. E. R. Loveland, Executive Secretary, 133-135 South 36th Street, Philadelphia, Pa.

June, 1935—Medical Library Association will meet in Rochester, N. Y. For details, address the Secretary: Miss Frances N. A. Whitman, Librarian, Harvard University Schools of Medicine and Public Health, Boston, Mass.

June 27-29 inc.—British National Association for the Prevention of Tuberculosis will be held at Southport, England. Persons desiring further information should write to Miss F. Stickland, Secretary of the Association at Tavistock House North, Tavistock Square, London, W. C. I., England.

July 22-27—Seventh International Congress on Industrial Accidents and Diseases, Brussels, Belgium. The American Committee of the Congress is under the chairmanship of Dr. Fred H. Albee, New York, for the Section on Accidents, and that of Dr. Emery R. Hayhurst, Columbus, Ohio, for Industrial Diseases. The American delegation to the Congress will sail from New York on July 8 and visit London, Amsterdam, The Hague and Paris, and, optionally, Budapest. Physicians interested in the Congress or in the medical tour in conjunction with it, may address the Secretary, Dr. Richard Kovacs, 1100 Park Avenue, New York City.

DISTRICT MEDICAL SOCIETIES

ESSEX NORTH DISTRICT MEDICAL SOCIETY

The Annual Meeting will be held in May. Time, place and subject to be announced.

E. S. BAGNALL, M.D., Secretary.

FRANKLIN DISTRICT MEDICAL SOCIETY

Meetings will be held on the second Tuesday of March and May at the Weldon Hotel, Greenfield, Mass.

CHARLES MOLINE, M.D., Secretary.
Sunderland.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

March 13—Wakefield.
May 8—Winchester.

K. L. MACLACHLAN, M.D., Secretary.
1 Bellevue Street, Melrose.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY

March 7—See page 365.

NORFOLK DISTRICT MEDICAL SOCIETY

February 26—Hotel Kenmore, Boston, at 8:15 P.M.

March 26—Fernald School for Feeble-Minded, Waverley. Details to be announced.

May—Annual Meeting. Date, time and place to be announced.

PLYMOUTH DISTRICT MEDICAL SOCIETY

March—Plymouth County Hospital.
April—Lakeville Sanatorium.

SUFFOLK DISTRICT MEDICAL SOCIETY

March 27—Clinical Meeting at the Boston Lying-In Hospital.

April 24—Clinical Meeting at the Children's Hospital.

The medical profession is cordially invited to attend these meetings.

ROBERT L. DeNORMANDIE, M.D., President.
GEORGE P. REYNOLDS, M.D., Secretary.

WORCESTER DISTRICT MEDICAL SOCIETY

March 13—Wednesday evening. The Memorial Hospital, Worcester, Mass. 6:30 P.M.: Buffet supper. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Buffet supper complimentary by the Hospital.

April 10—Wednesday evening. Worcester Hahnemann Hospital, Worcester, Mass. 6:30 P.M. Dinner. 7:30 P.M.: Scientific program and business session. Announcement of subjects and speakers to be presented at a later date. Dinner complimentary by the Hospital.

May 8—Wednesday afternoon and evening. Annual Meeting of the Worcester District Medical Society. The time and place of this meeting will be announced later.

ERWIN C. MILLER, M.D., Secretary.
27 Elm Street, Worcester.